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Trends in Drug Use: A Comparison of Metropolitan and Nonmetropolitan Areas of the United States From 1975 to 1991

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Between 1975 and 1991, the National Household Survey on Drug Abuse (NHSDA) collected drug, alcohol, and tobacco use data from individuals age 12 and older living in U.S. households. The NHSDA uses a multistage national probability sampling design. Sample sizes ranged from about 3,500 in 1975 to over 32,000 in 1991. These data are used to report trends in illegal drug use for large and small metropolitan and nonmetropolitan areas of the United States. Lifetime-use patterns of marijuana, hallucinogens, inhalants, and cocaine by age group for the three population density areas are compared. Convergence and divergence in rates of use are noted. Findings may be helpful to cooperative extension specialists, other educators, and substance abuse prevention and treatment personnel.

The family unit affects—and is affected by—drug use of individual members. However, less attention has been focused on drug use of family members in nonmetropolitan than in metropolitan areas. As early as 1979, it was demonstrated that rural/urban differences in rates of substance abuse were declining and would eventually disappear if the trends persisted (4). Since the 1970's, socioeconomic and demographic differences that once distinguished metro and nonmetro families have also diminished. For example, rural families have experienced increased divorce rates, declining family size, and increased numbers of women working outside the home (7).

Many traditional characteristics of non-metro families, such as marital stability, large family size, and at-home mothers, have been viewed as indicators of strong family values and buffers against stress. On the other hand, economic distress, poverty, and family dissolution are conditions associated with substance abuse. As the nonmetropolitan and metropolitan populations become more similar with regard to these family and economic characteristics, they may also become more similar in negative coping behaviors, such as substance abuse. In fact, many studies have documented examples where the prevalence of abuse for some drugs was higher for particular nonmetropolitan subgroups than for their urban counterparts (2,3,5,6,16).

A starting point for understanding the role of family in substance abuse problems in nonmetro areas is the definition of the nature and extent of the problem. Is the prevalence of substance use lower in nonmetro than metro areas? Do age group use pattern differences that are evident in metropolitan areas hold for nonmetropolitan areas? Have rates of substance abuse in metro and nonmetro areas converged over time? In this study, 1975 to 1991 data from a national representative study are used to document the lifetime prevalence of marijuana, hallucinogen, inhalant, and cocaine use for three population density areas: Large metro, small metro, and nonmetro. Data are presented for youth (12 to 17 years), young adults (18 to 25 years), and adults (26 years and older).

Data

Data come from published reports of findings from the National Household Survey of Drug Abuse (NHSDA).¹ This is the only U.S. national survey that produces estimates of drug use among people age 12 and older. The NHSDA sample design is a multistage area probability sample. Sample sizes range from about 3,500 in 1975 to over 32,000 in 1991 (table 1).

Through 1990, the target population was the household population of the 48 contiguous States. In 1991, this definition was broadened to include the civilian, noninstitutionalized population of the entire United States. This change introduces some minor inconsistency between the 1991 sample and earlier samples. However, its impact on assessing trends in drug use estimates is generally inconsequential (9).

¹Formerly the National Survey on Drug Abuse (1977-1982) and the Nonmedical Use of Psychoactive Substances (1975).

Table 1. NHSDA sample sizes from 1975 to 1991

Year	Youth 12-17 years	Young adults 18-25 years	Adults 26+ years	Adults 26-34 years	Adults 35+ years	Total
1975	986	882	1,708			3,576
1977	1,272	1,500	1,822			4,594
1979	2,165	2,044	3,015			7,224
1982	1,581	1,283	2,760			5,624
1985	2,246	1,813		2,166	1,813	8,038
1988	3,095	1,505		1,987	2,227	8,814
1990	2,177	2,052		2,355	2,675	9,259
1991	8,005	7,937		8,126	8,526	32,594

Sources: (1,8-14).

There are several limitations to these data. First, until the definition of the target population changed in 1991, the survey excluded the homeless, incarcerated individuals, and residents of college dormitories, single room hotels, military installations, nursing homes, and treatment centers. Several of these subpopulations are believed to be at risk for substance abuse. Since 1991, the sheltered homeless and those residing in college dormitories and civilians living on military installations have been sampled. However, other at-risk groups, such as migrant farm laborers, remain outside the scope of the survey.

Second, data are self-reported, thus accuracy depends on respondents' truthfulness and memory. To encourage accurate reporting, respondent's anonymity and privacy of responses are protected through methods that allow respondents to mark answer sheets and return data without assistance. In addition, identifying information is separated from survey responses on the data files.

Third, data are not available for all drugs, for all ages, for all years of the survey. For cocaine, hallucinogens, and inhalants, baseline data are available for 1975. The next available data point is 1985. For adults, data are reported for those age 26 and older from 1975 to 1982. Starting in 1985, data are reported for two adult age groups: age 26 to 34 and age 35 and over. The reporting of adult data in one group before 1985 probably masks subgroup differences that are observed for the two groups in the later reporting schema.

Moreover, the treatment of missing data varies with wave of data collection. From 1975 through 1982, cases with missing data were treated as nonusers; in 1985, cases with missing data were excluded; and from 1988 to 1991, logical and statistical imputation procedures were used to estimate values for missing data when possible. Finally, definitions of population density area types vary across waves of data (table 2).

...similarity of [drug] use patterns across the three population density areas is striking.

Table 2. Population density area type definitions by year of survey

Year	Large metro	Small metro	Nonmetro
1991	MSA ¹ with a 1990 population of 1,000,000 or more	MSA with a 1990 population of 50,000 to 999,999	Not part of an MSA as of 1990
1988, 1990	SMSA ² with a 1980 population of 1,000,000 or more	SMSA with a 1980 population of 50,000 to 999,999	Not part of an SMSA as of 1980
1985	SMSA with a 1980 population of 250,000 or more	SMSA with a 1980 population under 250,000	Not part of an SMSA as of 1980
1979, 1982	SMSA with a 1970 population of 1,000,000 or more	SMSA with a 1970 population under 1,000,000	Not part of an SMSA as of 1970
1975, 1977	Includes the top 25 SMSA's as of 1970	SMSA's not included in large metro	Not part of an SMSA as of 1970

¹Metropolitan Statistical Area.

²Standard Metropolitan Statistical Area.

Sources: (1,8-14).

Measure

From 1975 to 1991 the question “**When was the most recent time you used (drug name)?**” was asked for each substance of interest. Lifetime use occurred if a respondent ever used the particular drug, regardless of when or how often it was used. Thus, lifetime use indicates whether the respondent ever used the drug. To ensure complete and accurate responses, minor changes in the naming of drugs were made over the years. These changes are not expected to affect comparability of responses.

Results

Results are presented separately for each of the four drugs or categories: Marijuana, hallucinogens, inhalants, and cocaine. First, metropolitan status comparisons, then age comparisons are made.

Marijuana

There was a high lifetime prevalence of marijuana use for all population density areas and age groups examined in this study (figs. 1a-1c). Throughout the period of the study, those who have ever used marijuana have been more concentrated in large and small metropolitan areas than in nonmetropolitan areas. However, lifetime-use rates among those living in the three population density areas have generally been converging. In 1991, the ever-used rate for the age 12 to 17 group was almost identical across the three population density areas. Moreover in 1991, the lifetime rate among youth and young adults residing in large and small metro areas was at its lowest point of the study. However, the rate for young adults residing in nonmetro areas was about 6.4 percent greater than the low rate recorded in 1975. Within age groups, the similarity of use patterns

Figure 1a. Lifetime marijuana use: Youth (12-17 years) by residence

Percent of U.S. population

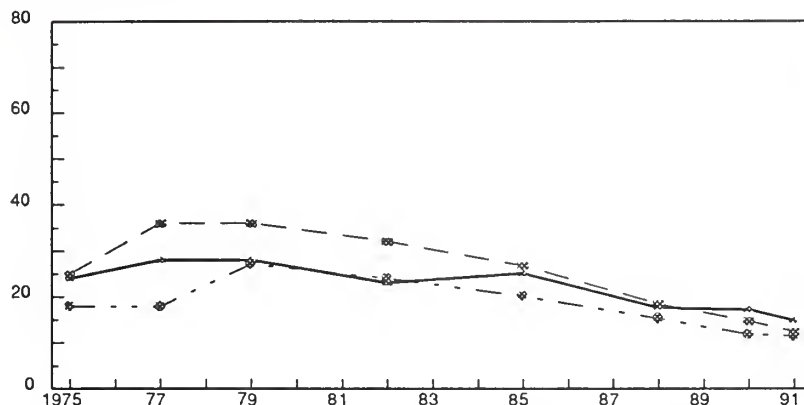


Figure 1b. Lifetime marijuana use: Young adults (18-25 years) by residence

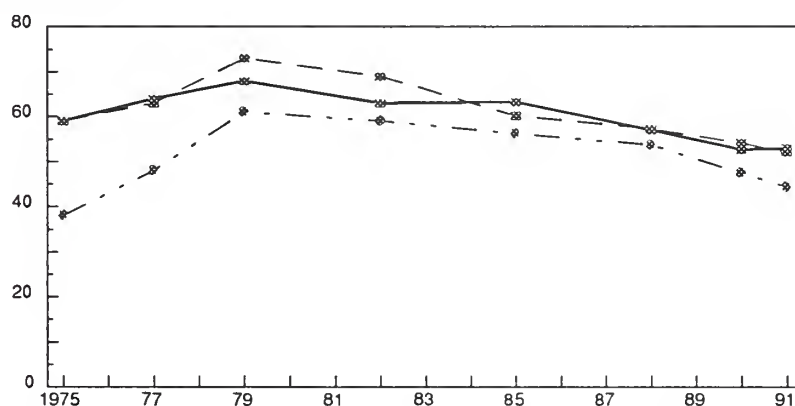
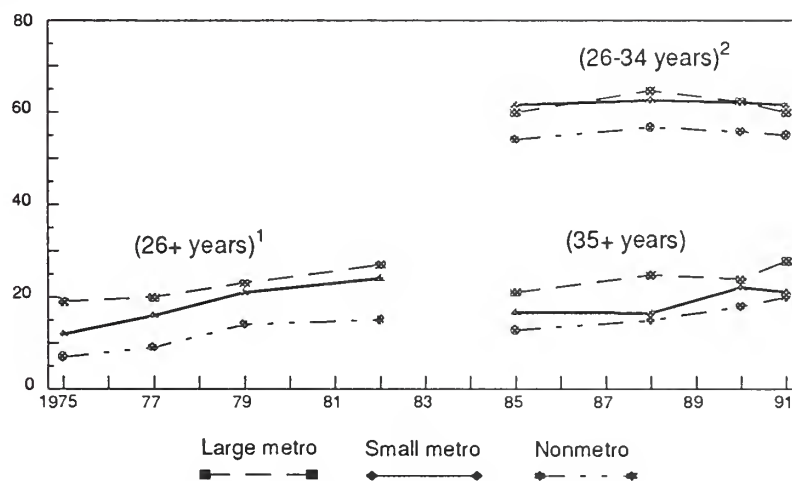


Figure 1c. Lifetime marijuana use: Adults by residence



¹ 1975-82 adult data grouped in one category: over age 25.

² 1985-91 adult data grouped in two categories: ages 26-34 and over age 34.

across the three population density areas is striking. However, distinct differences in patterns are evident when comparing across age groups without regard to metro-nonmetro status.

For youth and young adults, use peaked in the late 1970's. The magnitude of the subsequent declines has been substantial for both age groups, although the 1991 rate for the young adult group remained high, about 50 percent. For adults, there was a slight, but persistent increase in marijuana use from 1975 to 1982. For the age 26 to 34 adult group, the percentage of those who ever used was high and relatively stable from 1985 to 1991. In fact, prevalence was highest among members of this group throughout this period of the study, despite the fact that lifetime-use rates for the older adult group increased during the same period of time.

In 1985, the percentage of individuals age 18 to 25 and those age 26 to 34 who had ever used marijuana was almost identical. After 1985, lifetime use for those age 18 to 25 steadily declined while that for the age 26 to 34 group remained relatively stable. By 1991, the ever-used marijuana rate for those age 18 to 25 was about 10 percentage points below that of those age 26 to 34. The decline for the young adult group probably indicates a true decline in the ever-used marijuana rate for this age group over the period of the study. On the other hand, the rate for the 26 to 34 year group probably remained stable because those who entered the group over the 6-year period had roughly the same use rate as those who left the group and entered the oldest adult age group. The gradual increase in lifetime use for this oldest group from 1988 to 1991 supports this view.

Hallucinogens

Hallucinogens are a class of substances that distort perceptions. They include both natural and synthetic substances such as: Peyote, psilocybin, mescaline, LSD, PCP, and Ecstasy (15). Lifetime-use rates for hallucinogens tend to be similar across the three population density area types within age group and to a lesser extent across age groups (figs. 2a-2c). From 1985 to 1991, rates for the youth group and the age 35 and over group were uniformly low across population density area types (large metropolitan, small metropolitan, and nonmetropolitan areas). For those age 18 to 25 and age 26 to 34, nonmetropolitan lifetime prevalence reports were lower than those for large and small metropolitan areas, but rates for the three population density areas appear to be converging. The 1991 lifetime hallucinogen-use rate for 18- to 25-year-old nonmetro dwellers was higher than at any time since the baseline data collection point in 1975.

Within each age group, lifetime hallucinogen use was relatively stable from 1975 to 1991. The one major exception was a beginning-point peak for young adults in 1975. Across age groups, there were two predominant use patterns: one for the youngest and oldest age groups and another for the two middle age groups. Throughout the study, the ever-used rate for youth remained low, never exceeding 7.5 percent and typically hovering at or below 4 percent. Rates for the oldest adult group were also low, but these rates increased in the last 2 years of the study. From 1985 to 1991, lifetime hallucinogen-use rates of those age 18 to 25 fluctuated between 8 and 17 percent, whereas rates of those age 26 to 34 fluctuated between 12 and 20 percent. The pattern of yearly variations in lifetime prevalence for these two groups closely matched.

Figure 2a. Lifetime hallucinogen use: Youth (12-17 years) by residence

Percent of U.S. population

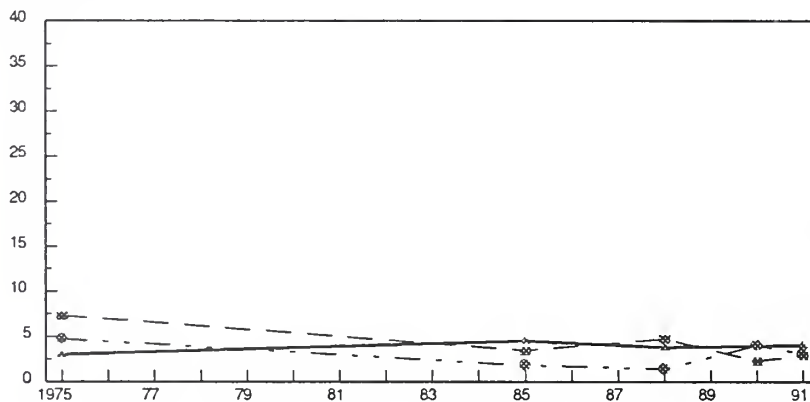


Figure 2b. Lifetime hallucinogen use: Young adults (18-25 years) by residence

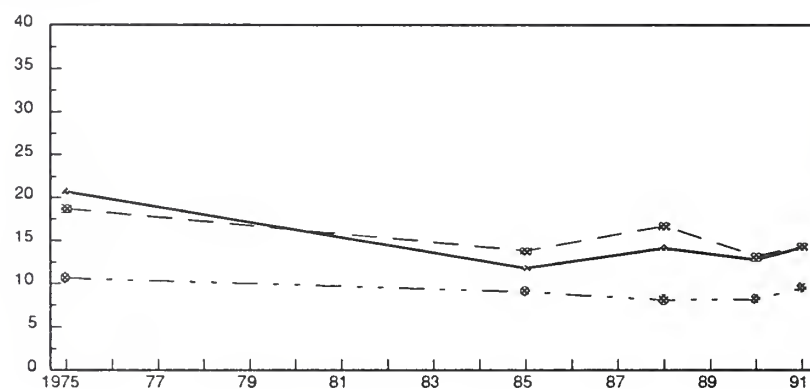
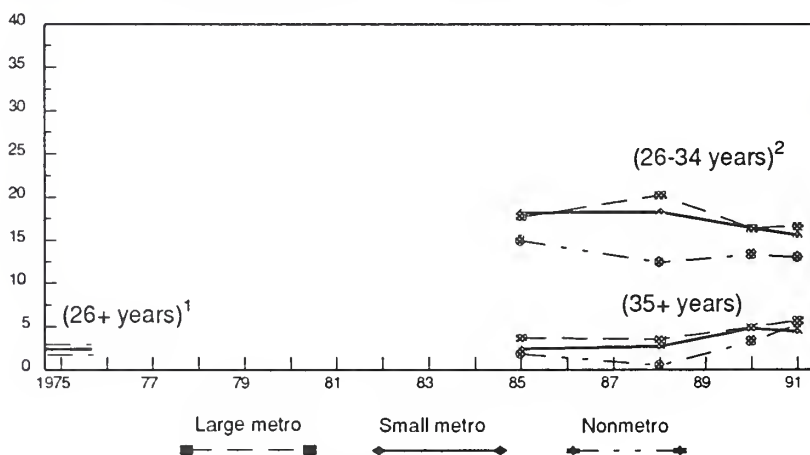


Figure 2c. Lifetime hallucinogen use: Adults by residence



¹ 1975-82 adult data grouped in one category: over age 25.

² 1985-91 adult data grouped in two categories: ages 26-34 and over age 34.

Prevalence rates of the young adult and age 26 to 34 groups were considerably higher than those of the youth and the age 35 and over groups. The slight upturn in lifetime use in 1990 and 1991 for the oldest adult group may indicate an age-group effect. That is, those who were 18 to 25 in 1975, when use was at a peak for that age group, would have been 33 to 40 in 1990. Their entry into the oldest adult group may have increased the number of respondents in the oldest adult group reporting lifetime use.

Inhalants

Unlike other classes of drugs, inhalants are not marketed as drugs and are not illegal. Rather, they are common substances, such as glue, gasoline, felt-tip markers, cleaning fluids, hair spray, propane, and spray paint. Each of these gives off harmful fumes, and abuse of these substances occurs when individuals purposefully sniff the fumes. Misusing substances in this way can result in permanent lung, kidney, liver, and brain damage.

For the youth and the oldest adult (age 35 and above) groups, prevalence rates did not appear to differ by population density areas across time (figs. 3a-3c). In fact, for youth, the population density area with the highest prevalence switched back and forth from nonmetro to small metro at each data collection point so that those with nonmetropolitan residence had the highest lifetime inhalant use at three of the five data collection points. In contrast, lifetime inhalant use for young adults in 1975, 1985, and 1988 and for adults age 26 to 34 in 1985 and 1988 was slightly lower in nonmetropolitan areas than in large and small metropolitan areas. More recently, however, prevalence rates appear to be converging.

Like hallucinogens, lifetime inhalant use was relatively stable for all age groups, from 1975 to 1991. Moreover, there was great consistency in prevalence.

Figure 3a. Lifetime inhalant use: Youth (12-17 years) by residence

Percent of U.S. population

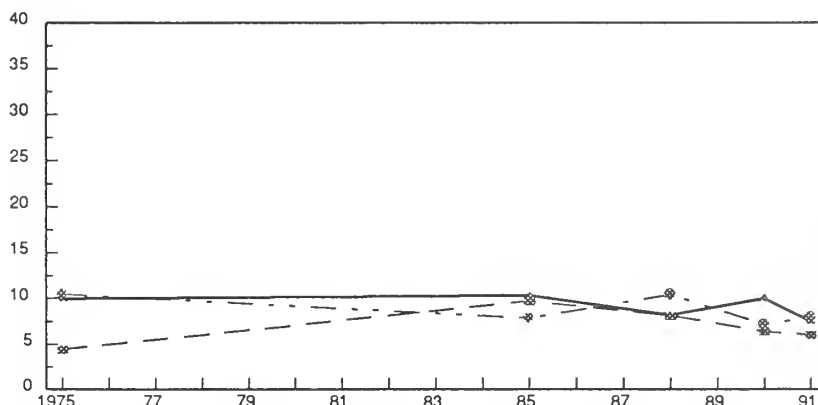


Figure 3b. Lifetime inhalant use: Young adults (18-25 years) by residence

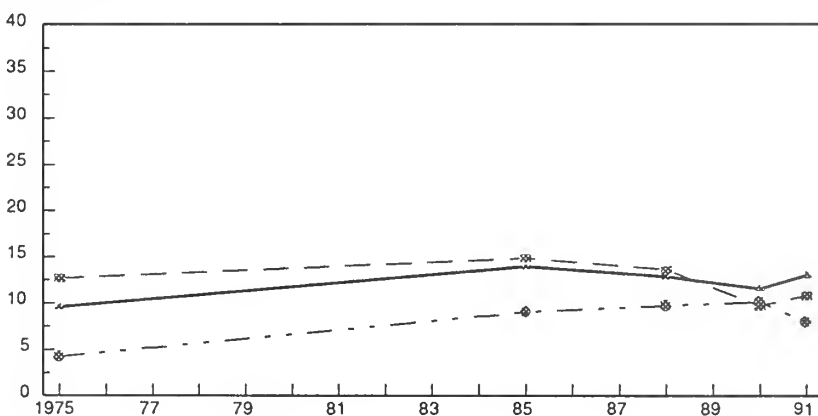
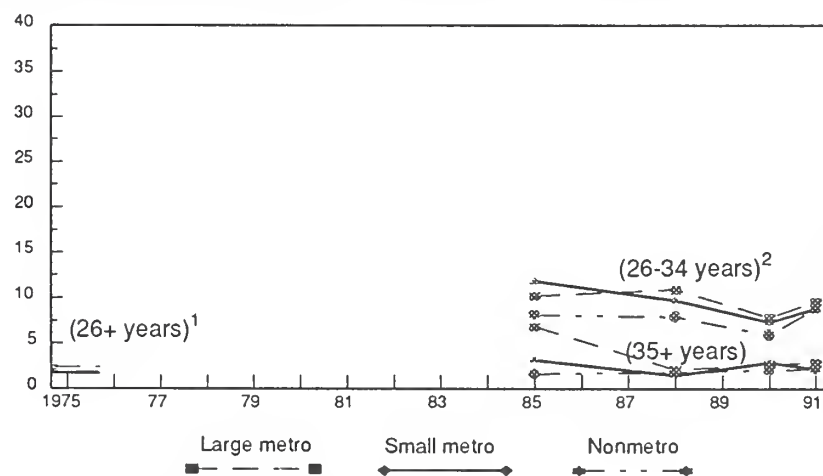


Figure 3c. Lifetime inhalant use: Adults by residence



¹ 1975-82 adult data grouped in one category: over age 25.

² 1985-91 adult data grouped in two categories: ages 26-34 and over age 34.

Specifically, the yearly ever-used rates for young adults were the highest, closely followed by those for the age 26 to 34 group and the youth group. Prevalence rates for the latter two groups was very similar over time with the rates for the age 26 to 34 group being slightly higher in 1991. A very small percentage of adults age 35 and over report ever having used inhalants.

Cocaine

Two lifetime cocaine-use patterns by population density area type were evident: one for the youngest and oldest age groups and another for the two age groups in the middle. For youngest and oldest age groups, lifetime use of cocaine was low and relatively similar across residential area types from 1975 to 1991 (figs. 4a-4c). For the two age groups in the middle, cocaine use in large metro areas was typically highest, whereas use in nonmetro areas was lowest. From 1985 to 1988, it appeared that use in nonmetro areas was declining at a faster rate than that in metro areas. In 1991, however, lifetime use in metro areas remained stable or continued to decline, whereas use in nonmetro areas increased.

Over time, the ever-used prevalence for cocaine varied considerably by age group. Between 1975 and 1991, lifetime experience with cocaine among youth was stable and low, never exceeding 6 percent. During the same period, lifetime cocaine use for adults age 35 and over was also low, but it reached its highest point in 1991. Among those age 18 to 25, lifetime use peaked in 1982 and has been declining ever since. Nevertheless, the 1991 lifetime-use rates for this age group were higher than in 1975. Of all groups, the highest rates for ever-used cocaine were for the 18 to 25 and the 26 to 34 age groups. Since 1985, when data were first reported for the age 26 to 34 group, there has been a relatively stable pattern of use.

Figure 4a. Lifetime cocaine use: Youth (12-17 years) by residence

Percent of U.S. population

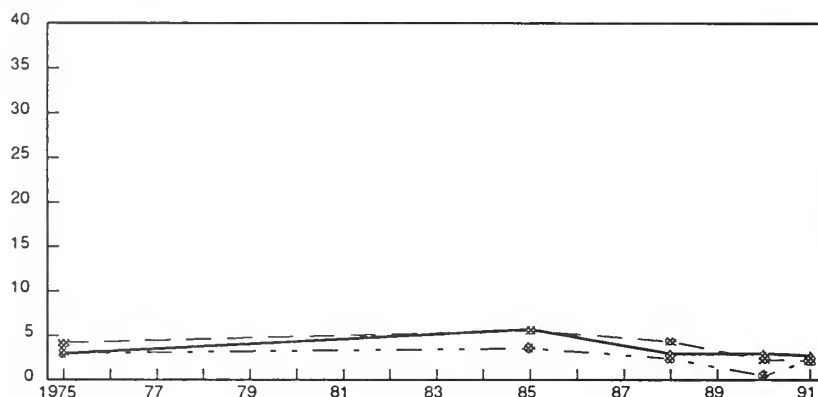


Figure 4b. Lifetime cocaine use: Young adults (18-25 years) by residence

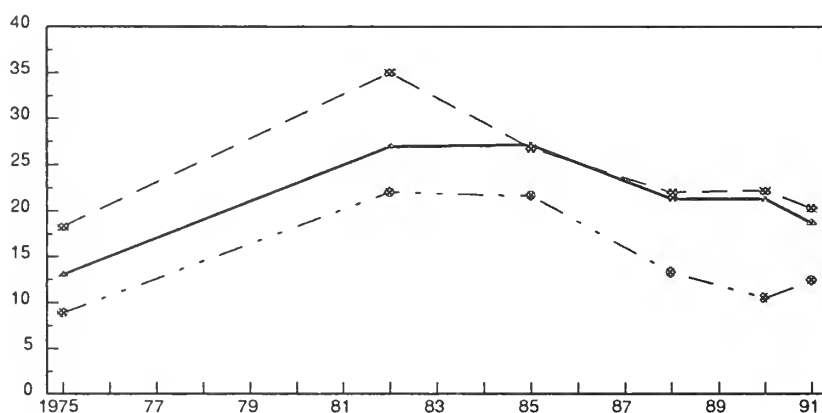
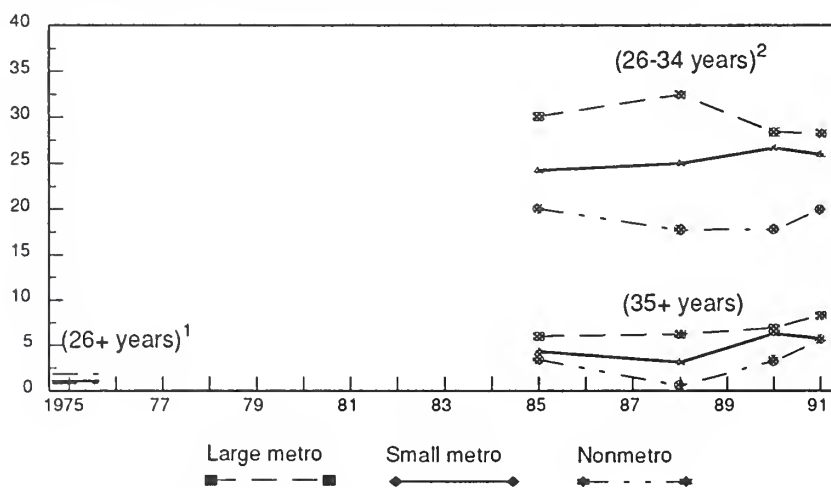


Figure 4c. Lifetime cocaine use: Adults by residence



¹ 1975-82 adult data grouped in one category: over age 25.

² 1985-91 adult data grouped in two categories: ages 26-34 and over age 34.

In 1985, lifetime cocaine-use rates for those in the age 18 to 25 and 26 to 34 groups were almost identical. The subsequent decrease in rate for those age 18 to 25, stability of rate for those 26 to 34, and increase in rate for those age 35 and over suggests an age-group effect similar to that indicated by the data on marijuana and hallucinogens.

Conclusions

As is always the case when examining cross-sectional data over time, caution must be exercised in interpreting the results. One major limitation of this study is that the data available were for lifetime rather than current or past month use. Thus, clear conclusions regarding initiation and continuation of substance-use behaviors, especially for adults, cannot be drawn. However, these data do offer important glimpses into the prevalence of substance abuse in the United States and into why increases in lifetime prevalence are indicated for some groups, with some drugs, at some times. For example, as was pointed out in the results section, the recent increase in lifetime prevalence of marijuana, hallucinogen, and cocaine use by older adults is almost certainly the result of an age-group effect. Less obvious are the implications of the data for the youth.

Over time, the ever-used rates of all four drugs were low and relatively stable for the age 12 to 17 group. This is an indication that there is a small group, about 3 to 37 percent of the youth population, that is beginning chemical use at an early age. Population density appears to have little influence on this behavior as nonmetropolitan youth initiate use of marijuana, hallucinogens, inhalants, and cocaine at about the same rate as metro youth. In the special case of inhalants, nonmetro and small metro youth have had as high or higher lifetime-use rates than large metro youth since 1975. The stability in rates of inhalant use for nonmetro and small metro youth may be

related to the availability and affordability of solvents, household products, and other chemicals abused in this way. On the other hand, the merging over time of the lifetime-use rates of marijuana, hallucinogens, and cocaine for youth residing in metro and nonmetro areas may be an indication that drug dealers are now exploiting a new market: rural America.

In contrast to the low but stable rates of lifetime drug use by youth, the rates of marijuana, cocaine, and hallucinogen use for the young adult group are high. The large difference between the youth and young adult years in these lifetime-use rates is an indication that at some point in the early adult years, large numbers of individuals are experimenting with or beginning regular use of these three drugs. Although the lifetime use of all four drugs by young adult residents of nonmetro areas has generally been below that of metro residents, it has been substantial. Moreover, the data indicate that the rates for the three population density areas are converging.

The interpretation of the data for the two adult groups is less clear because of the probable cross-time influence of cohort membership. It is clear from these data, however, that of the four drugs in this study, marijuana is the most widely experienced by all age groups and in all population density areas. The second most experienced drug is cocaine, followed by hallucinogens. Data on inhalants suggest that this category of chemical abuse is primarily a problem of the young; lifetime rates of inhalant use are highest for those age 25 and younger and are consistently very low for those over age 35.

In summary, these data indicate two groups of most concern. First, across time and place, there is a small percentage of youth age 12 to 17 who report drug use, suggesting that there is a segment of the population who are especially at risk for this type of

problem behavior. Second, the higher prevalences for marijuana, hallucinogens, and cocaine use by young adults compared with youth indicate there is a large group of young adults who experiment with, and therefore have the potential to become regular users of, drugs. Although the rates of ever-used among this group have shown a gradual decline over time, they are still high. The period from age 18 to 25 is a time when most people complete their education, begin a career, and form a family. Experimentation with drugs can interfere with the accomplishment of these tasks.

Finally, for youth and those age 35 and over, lifetime rates of substance abuse have been similar across time and across population density areas. To some extent, this is the case because the lifetime prevalence for these age groups is low. Large metro, small metro, and nonmetro differences are apparent for the young adult and the age 26 to 34 groups, but these differences have been diminishing. This trend suggests that as residents of nonmetro areas have become more similar to those of metro areas with regard to demographic characteristics, they have also become more similar with regard to substance use patterns.

Implications

The consistent finding that a small group of youth and a much larger group of young adults have used selected drugs suggests that prevention and intervention programs need to begin early. Special attention should be paid to educating those age 12 to 17 and younger about the devastating and irreversible mental and physical effects of inhalant use. However, many questions that could influence the effectiveness of prevention and intervention programs in nonmetropolitan areas remain. For example: (1) Do the similar lifetime-use rates in metro and nonmetro areas mean the same thing or is there more short-term experimentation by those residing

in nonmetro areas compared with those in metro areas? and (2) do lifestyle differences of those residing in large and small metro and nonmetro areas have implications for effective prevention and intervention strategies?

Finally, there is a need to examine how the changing demographic and economic fabric of nonmetro areas relates to substance abuse. More research is needed to answer questions such as: (1) Is the narrowing of the gap in substance abuse across population density areas the result of stress and the breakdown of social support, the product of expanding drug markets, or both? and (2) in the face of economic and social decline, how can families and communities in nonmetro areas build resources that provide positive alternatives to substance abuse? Lack of money, personnel, and facilities for health and mental services are real and growing problems in rural areas. Answers to questions such as these should help ensure the wise use of these limited resources.

References

1. Abelson, H.I. and Fishburne, P.M. 1976. *Nonmedical Use of Psychoactive Substances, 1975/6 Nationwide Study Among Youth and Adults, Part 2, Detailed Tabulations* (RAC 3698B). Response Analysis Corporation, Princeton, NJ.
2. Gleaton, T.J., Jr. and Smith, S.P. 1981. Drug use by urban and rural adolescents. *Journal of Drug Education* 11(1):1-8.
3. Hahn, D.B. 1982. A statewide comparison of student alcohol and marijuana use patterns at urban and rural public schools. *The Journal of School Health* 52(4):250-255.
4. Harrell, A.V. and Cisin, I.H. 1981. *Drug Abuse in Rural America*. DHHS Publication No. (ADM)81-1050.
5. Lassey, M.L. and Carlson, J.E. 1979. Drinking among teenagers: Rural-urban comparison in peer influence. *Journal of Alcohol and Drug Abuse* 24(3):8-18.
6. Peters, V.J., Oetting, E.R., and Edwards, R.W. 1992. Drug use in rural communities. In: R.W. Edwards (ed.), *Drug Use in Rural American Communities*. The Hawthorne Press, Inc., Binghamton, NY.
7. Rogers, C.C. 1991. Nonmetro/metro children: Similar families, different economic conditions. *Rural Development Perspectives* 7(1):40-41.
8. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. 1993. *National Household Survey on Drug Abuse: Main Findings 1991*. DHHS Publication No. (SMA)93-1980.
9. U.S. Department of Health and Human Services, National Institute on Drug Abuse. 1991. *National Household Survey on Drug Abuse: Main Findings 1990*. DHHS Publication No. (ADM)91-1788.
10. U.S. Department of Health and Human Services, National Institute on Drug Abuse. 1990. *National Household Survey on Drug Abuse: Main Findings 1988*. DHHS Publication No. (ADM)90-1682.
11. U.S. Department of Health and Human Services, National Institute on Drug Abuse. 1988. *National Household Survey on Drug Abuse: Main Findings 1985*. DHHS Publication No. (ADM)88-1586.
12. U.S. Department of Health and Human Services, National Institute on Drug Abuse. 1983. *National Survey on Drug Abuse: Main Findings 1982*. DHHS Publication No. (ADM) 83-1263.
13. U.S. Department of Health and Human Services, National Institute on Drug Abuse. 1980. *National Survey on Drug Abuse: Main Findings 1979*. DHHS Publication No. (ADM) 80-976.
14. U.S. Department of Health, Education and Welfare, National Institute on Drug Abuse. 1977. *National Survey on Drug Abuse: A Nationwide Study: Youth, Young Adults, and Older People, Vol. 1, 1977 Main Findings*. DHEW Publication No. (ADM 78-618).
15. U.S. Department of Justice, Drug Enforcement Administration. *Drugs of Abuse*. 1988 Edition. JUS-437. Washington, DC.
16. Wargo, M.J. et al. 1990. *Rural Drug Abuse: Prevalence, Relation to Crime, and Programs*. GAO Publication No. PEMD-90-24.

Expenditures for Baby-Boomer Householders: Racial and Ethnic Differences

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The economic well-being of the baby-boomer generation is influenced by its ethnic and racial diversity. Using the 1990-91 Consumer Expenditure Surveys, this study examines non-Hispanic Black, Hispanic, Asian American, and non-Hispanic White baby-boomer householders' current economic well-being, as measured by expenditures. Results show that on a household and per person basis, total expenditures of non-Hispanic Black boomer householders are lower than total expenditures of other boomer householders. On a household basis, Hispanic boomer householders are likely to spend more than other boomers for food and food at home. Asian American boomers are more likely than other boomers to spend more for housing and education. Compared with other boomer householders, non-Hispanic White boomer householders have higher expenditures for transportation, personal insurance and pensions, apparel, health care, and other goods and services. Results are useful to professionals who focus on the expenditure patterns of economically vulnerable groups in the baby-boomer generation.

The economic well-being of the baby-boomer generation is influenced by its ethnic and racial diversity. In 1990, there were 80.8 million people 25 to 44 years old in the U.S. population. So 32 percent of the population was in the age category that includes baby boomers (those born between 1946 and 1964). Seventy-five percent of baby boomers were non-Hispanic White; 12 percent were non-Hispanic Black; 3 percent, non-Hispanic Asian American; 9 percent, Hispanic; and 1 percent belonged to other racial and ethnic groups (7).

Other Census findings show that, compared with boomers in other ethnic and racial groups, Asian American and Pacific Islander boomers (age group 25 to 44) had the fastest growth rate.

Between 1981 and 1991, Asian American baby boomers increased by 90.9 percent, followed by Hispanic (72.9 percent) and non-Hispanic Black (34.2 percent) boomers. Compared with other boomers, non-Hispanic White baby boomers had the slowest rate of increase (18.6 percent) (5).

It has been noted that although many boomers may be in a financial position as good or better as their parents experienced as young adults, some segments of this generation have not fared as well and may be at special economic risk approaching retirement. Among those who may be vulnerable economically are ethnic and racial minorities, females who head households with children, renters and those who purchase homes late in the life cycle, the less educated, and those with lower household incomes (3,6).

Because of the great demand that may be placed on the Nation's economic resources to support this large generation during their retirement years (2010 to 2030 onward) and because the group's diversity may have implications for policy development, their economic status is of concern. Therefore, this study will assess economic well-being by examining expenditures of non-Hispanic Black, Hispanic, Asian American, and non-Hispanic White baby-boomer householders who are entering midlife. The research question is: Based on ethnic origin and race, what are the average household and per capita expenditures and what share of total expenditures is used for different goods and services?

Source of Data and Sample

Data for this study are from the interview component of the 1990 and 1991 Consumer Expenditure Surveys (CE) conducted by the Bureau of the Census for the Bureau of Labor Statistics (8). The CE is an ongoing survey that collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of consumer units¹ is interviewed once each quarter for five consecutive quarters; the first interview is used only for bounding purposes.²

¹A consumer unit consists of either: (1) all members of a particular housing unit who are related by blood, marriage, adoption, or other legal arrangements; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent. In this article, "consumer unit" and "household" are used interchangeably.

²A 1-month recall of expenditures is collected in this interview. This prevents the reporting of expenditures for an indefinite period in the past. Demographic and family characteristics are also collected at this time.

Table 1. Characteristics of households headed by baby boomers, 1990-91

Characteristics	Total	Non-Hispanic Black	Hispanic	Asian American	Non-Hispanic White
Sample size	17,462	1,941	1,277	497	13,747
Householder					
Education					
Less than high school	13	21	40	11	9
High school	31	37	27	17	31
Some college	26	28	21	19	27
College graduate	30	14	12	53	33
Occupation					
Managerial and professional specialty	30	15	15	37	33
Technical, sales, and administrative support	22	25	18	16	22
Production and other ¹	25	23	35	19	24
Other ²	16	20	18	16	16
Not working and retired ³	7	17	14	12	5
Household					
Before-tax family income					
<\$10,000	8	20	14	11	6
\$10,000 - \$19,999	14	21	22	16	12
\$20,000 - \$29,999	16	15	18	13	16
\$30,000 - \$39,999	15	12	15	13	15
\$40,000 - \$49,999	11	6	9	11	12
\$50,000 +	22	9	11	21	26
Incomplete reporters	14	17	11	15	13
Number of earners					
None	4	12	8	7	2
One	40	46	38	41	39
Two	45	32	38	43	49
Three or more	11	10	16	9	10
Family type					
Husband,wife, own children	57	34	49	52	62
Single parents	11	28	15	10	8
Single persons	20	19	13	17	20
Others	12	19	23	21	10
Region					
Urban					
Northeast	18	18	19	17	18
Midwest	21	21	9	13	22
South	28	47	31	23	25
West	20	10	40	44	19
Rural	13	4	1	3	16

¹Consists of craft, repair, operators, fabricators, and laborers.

²Consists of service professions; farming, forestry, and fishing; the Armed Forces; the self-employed; and others.

³Less than one-half of a percent of any group had retired individuals.

Table 2 . Average expenditures for households headed by baby boomers, 1990-91

Variable	Total	Non-Hispanic Black	Hispanic	Asian American	Non-Hispanic White
Before-tax family income ¹	\$37,668	\$24,890	\$28,921	\$35,896	\$40,454
Total expenditures	30,668	19,980	25,992	32,287	32,689
Housing	10,039	6,958	9,022	12,111	10,540
Food	4,861	3,668	5,197	4,917	5,005
Food at home	3,611	3,029	4,329	3,784	3,621
Food away from home	1,250	639	868	1,133	1,384
Transportation	5,756	3,351	4,649	6,160	6,216
Personal insurance and pensions	3,452	2,022	2,268	3,402	3,787
Apparel	1,626	1,322	1,500	1,338	1,693
Health	1,216	636	894	899	1,344
Education and reading	574	289	376	1,281	615
Miscellaneous ²	3,144	1,734	2,086	2,179	3,489

¹Complete income reporters.

²Consists of expenditures for personal care, tobacco, cash contributions, alcohol, entertainment, and other goods and services.

Using a rotating sample design, about one-fifth of the sample is replaced each quarter. Each year of CE data contains information for about 20,000 quarterly interviews. Income data are annual, and quarterly expenditure data are multiplied by four to provide estimates of annual expenditures. The data are weighted to represent the U.S. civilian noninstitutionalized population.

Two years of data are used to provide an adequate sample size of Asian Americans. Only consumer units with a reference person³ 27 to 45 years old (in 1991) were selected. There were 17,462 consumer units with a baby-boomer

reference person.⁴ Of these, 78 percent were non-Hispanic White, 12 percent were non-Hispanic Black, 8 percent were Hispanic, and 2 percent were non-Hispanic Asian American.⁵ Data on all boomer householders are provided in the tables for comparison.

Characteristics of Baby-Boomer Householders

Education

Among boomer householders, Hispanics were more likely than the others to have only a high school education or less (table 1). Sixty-seven percent of Hispanics, compared with 58 percent of Blacks, 28 percent of Asians, and 40 percent of Whites had no more than a high school education. Asians were more likely than

the others to be college graduates (53 percent). Thus, Blacks and Hispanics were less likely than Asians and Whites to have attended college to enhance their marketable skills.

Occupation

Asian and White boomers were twice as likely as other boomers to be in managerial and professional occupations, reflecting their higher education level. One-quarter of Blacks were in technical, sales, and administrative support occupations. Hispanics were more likely than other boomers to be in precision production (craft, repair and operators, fabricators, and laborers). Whites were less likely than other boomers to be unemployed.

Income

Black and Hispanic baby-boomer householders were less likely than other boomer householders to have before-tax family mean income over \$30,000 during the 12 months preceding the interview. Blacks had the lowest average before-tax family income, \$24,890 (table 2).

³Reference person is the first family member mentioned by the survey respondent when asked to "start with the name of the person or one of the persons who owns or rents the home." The relationship of all other consumer unit members is determined by this person. The reference person may be the respondent. In this article, "householder" and "reference person" are used interchangeably.

⁴Because the expenditure tapes for public use do not include data from the bounding interview, this sample size is smaller than is reported in the Bureau of Labor Statistics' published tables.

⁵For the remainder of this article, the following terms are used: White, Black, Hispanic, and Asian.

Table 3. Per capita expenditures for households headed by baby boomers, 1990-91

Variable	Total	Non-Hispanic Black	Hispanic	Asian American	Non-Hispanic White
Before-tax household income ¹	\$12,190	\$7,952	\$7,359	\$10,435	\$13,575
Total expenditures	9,925	6,383	6,614	9,386	10,969
Housing	3,249	2,223	2,296	3,521	3,537
Food	1,573	1,172	1,322	1,429	1,680
Food at home	1,169	968	1,102	1,100	1,215
Food away from home	405	204	221	329	464
Transportation	1,863	1,071	1,183	1,791	2,086
Personal insurance and pensions	1,117	646	577	989	1,271
Apparel	526	422	382	389	568
Health	394	203	227	261	451
Education and reading	186	92	96	372	206
Miscellaneous ²	1,017	554	531	633	1,171

¹Complete income reporters.

²Consists of expenditures for personal care, tobacco, cash contributions, alcohol, entertainment, and other goods and services.

They had 86 percent as much income as Hispanics, 69 percent as much as Asians, and 62 percent as much income as Whites. Because of family size, Hispanic boomers had the lowest average before-tax per capita income (\$7,359): 93 percent as much as Blacks, 71 percent as much as Asians, and 54 percent as much as Whites (table 3). Among all boomer householders, there was an average of 3.09 people in the household. Hispanic boomer householders had an average of 3.93 people in their households, compared with 3.44 for Asian, 3.13 for Black, and 2.98 for White boomer householders.

Number of Earners

Black boomers were more likely to have one-earner than two-earner households (46 percent versus 32 percent), whereas Hispanic boomers were as likely to have one- as to have two-earner households (38 percent). White boomers were more likely to have two-earner (49 percent) households than other types of earner households. Twelve percent of Blacks,

compared with 8 percent of Hispanic, 7 percent of Asian, and 2 percent of White boomers had no earners in the household.

Family Type

Among boomer householders, Blacks were less likely than others to be in families composed of a husband, wife, and their own children. Twenty-eight percent of the Black boomers were single parents, compared with only 15 percent of Hispanics, 10 percent of Asians, and 8 percent of Whites. Black, Hispanic, and Asian householders were about twice as likely as White householders to be in families composed of extended family members and others.

Region

Black boomer householders were more likely than other boomer householders to live in the urban South (47 percent). Hispanics (40 percent) and Asians (44 percent) were more likely than other boomers to live in the urban West. A

higher percentage of White boomers than their counterparts lived in rural areas; that is, places outside a Metropolitan Statistical Area (MSA) and within an area with less than 2,500 people. Where vulnerable groups live is important, especially since region affects one of the largest consumer expenditures—housing.

Housing Tenure

Home ownership is a major contributor to economic well-being (3,6). It can increase household wealth because, over the course of 25 to 30 years, most houses increase in value. Mortgage interest and real estate tax deductions favor the homeowner by lowering the overall tax obligation. Also, accumulated home equity can be a source of credit and, in later years, converted to income. Results show that compared with other boomer householders, a higher percentage of Blacks were renters (table 4). Sixty-nine percent of Black boomers rented their housing unit as did over

half of Hispanics (58 percent) and Asians (55 percent). Sixty-five percent of Whites owned their unit. At this point in the life cycle, not all boomers are able to increase assets through home ownership. Thus, they may need to rely on other assets to increase household wealth.

Housing Type

Compared with Black, Hispanic, and Asian boomer householders, White boomer householders were more likely to live in single-family detached units (66 percent). Thus, the group with the highest percentage of homeowners was also the group most likely to live in single-family detached units.

Results

Total Expenditures

Black boomer householders spent less than other boomer householders (by household and per person) (table 2 and table 3). On average, Blacks spent 23 percent less than Hispanics, 38 percent less than Asians, and 39 percent less than Whites. Per person expenditures were lowest for Blacks, then Hispanics, Asians, and Whites.

Housing

Housing was the largest expenditure for all boomer households. On a household basis, Black boomer householders spent the smallest dollar amount (\$6,958)—43 percent less than Asian boomer householders (\$12,111). On a per person basis, Blacks spent the smallest dollar amount (\$2,223)—37 percent less than White boomer householders (\$3,537). Although a majority of the Asian boomers were renters, their average housing dollar was higher than that of other boomers, and their per capita housing dollar nearly matched that of White boomers, a majority of whom were homeowners.⁶

Food

Compared with other boomer householders, Blacks spent less for total food (household and per person). Blacks spent \$3,668, 42 percent less than Hispanic boomer householders (\$5,197), who spent the most. On a household basis, Hispanics spent more than other boomers for food at home, whereas

⁶Reported housing expenditures for owners do not include payment on the principal (9).

Black boomer householders spent less than other boomer householders (by household and per person)

Table 4. Housing characteristics of households headed by baby boomers, 1990-91

Characteristic	Total	Non-Hispanic Black	Hispanic	Asian American	Non-Hispanic White
<i>Percent</i>					
Tenure					
Own	59	31	42	45	65
Rent	41	69	58	55	35
Housing type					
Single-family detached	61	42	47	45	66
Multiple unit	32	53	49	50	27
Other	7	5	4	5	7

Non-Hispanic Whites spent more per person for all categories except education, for which Asian Americans spent more.

Whites spent more for food away from home. This finding is supported by previous research that indicates that Hispanics have higher food-at-home expenditures than do African Americans and people of European origin (10).⁷ Also White boomers spent 28 percent of the food dollar for food away from home, Asians spent 23 percent, and Hispanics and Blacks spent 17 percent each. Per person total food expenditures were \$1,172 for Blacks, compared with \$1,322 for Hispanics, \$1,429 for Asians, and \$1,680 for Whites. For food at home and food away from home, Whites spent more per person than did the other boomers.

Transportation

On a household basis, Black boomers had the lowest transportation expenditures. They spent 28 percent less than Hispanics and 46 percent less than Asians and Whites. The number of vehicles influences transportation expenditures. The average number of vehicles among all boomers was 2.11. Black boomer householders had 1.17 vehicles, compared with 1.59 for Hispanics, 1.76 for Asians, and 2.31 for Whites.

Personal Insurance and Pensions

Expenditures for personal insurance and pensions ranged from \$2,022 by Black householders to \$3,787 by White householders. Blacks spent 11 percent less than Hispanics, 41 percent less than Asians, and 47 percent less than Whites. The level of investment in pensions, one of the major sources of retirement income, will affect the future economic well-being of these racial and ethnic groups. If income from private and public pensions is inadequate, some boomers may need to rely more heavily on Social Security payments.

⁷Reasons suggested as to why Hispanics have higher food-at-home expenditures included: the importance placed on food-at-home consumption as a family-oriented activity; a willingness to pay more to purchase the quality and brand desired; and perhaps a high consumption of red meat, a comparatively expensive source of protein.

Apparel

On a household basis, Black and Asian boomer householders spent similar amounts for apparel (\$1,322 and \$1,338, respectively). They spent 88 or 89 percent as much as did Hispanic boomer householders and 78 or 79 percent as much as did White boomer householders. On a per person basis, Whites spent the most, and Hispanics spent the least.

Health

One of the smallest expenditures for each group was health care—health insurance, medical services, drugs, and medical supplies. Boomers spent between \$636 and \$1,344 for health care in 1990-91. Blacks spent the least, followed by Hispanics, Asians, and Whites. White boomers spent \$451 per person for health care; other boomers spent between \$203 and \$261.

Education and Reading

Although boomers' education and reading expenditures are small compared with most other expenditures, this expenditure could influence the household's future economic well-being. In the current study, Black boomer households spent an average of \$289 for education and reading—23 percent less than Hispanics, 53 percent less than Whites, and 77 percent less than Asians. Previous research has shown that race and ethnicity are significant predictors of education and reading expenditures among families headed by baby boomers (4).

Other Goods and Services

Household expenditures for personal care, tobacco, cash contributions, alcohol, entertainment, and other goods and services ranged from \$1,734 (Blacks) to \$3,489 (Whites). Whereas White boomer householders spent 11 percent of their total expenditure for these goods and services, Blacks spent 9 percent; Hispanics, 8 percent; and Asians, 7 percent. Per capita expenditures were lowest for Hispanics and highest for Whites.

Expenditure Shares

Boomer expenditures on housing, food, and transportation (fig. 1) totaled 66 percent of the budget in White households, 70 percent in Black households, 72 percent in Asian, and 73 percent in Hispanic households. Thus, compared with non-Hispanic White boomers, ethnic and racial minorities in the baby-boomer group have a smaller share of their budget available for discretionary spending.

Compared with other boomers, Asian boomers spent a larger share for housing and for education and reading. Hispanic boomer householders spent a larger share for food; Asians and Whites spent slightly larger shares for transportation; Whites spent a larger share for personal insurance and pensions, health care, and other goods and services (personal care, tobacco, cash contributions, alcohol, entertainment, and miscellaneous items); and Blacks spent a slightly larger share for apparel.

Figure 2, p. 18, shows the shares of education expenditures used for newspapers, periodicals, books, encyclopedias and reference materials; school books, supplies and equipment; and tuition. Asian baby boomer householders spent a larger share of their education expenditure on all types of tuition (83 percent versus 63 percent for Hispanics and 59 percent each for Black and White boomers). Hispanic baby-boomer householders were less likely than other boomer householders to spend money for college tuition. Thirteen percent of Hispanic boomers had college tuition expenditures, compared with 40 percent of Asian, 30 percent of White, and 26 percent of Black boomers.

Figure 1. Expenditure shares for households headed by baby boomers, 1990-91

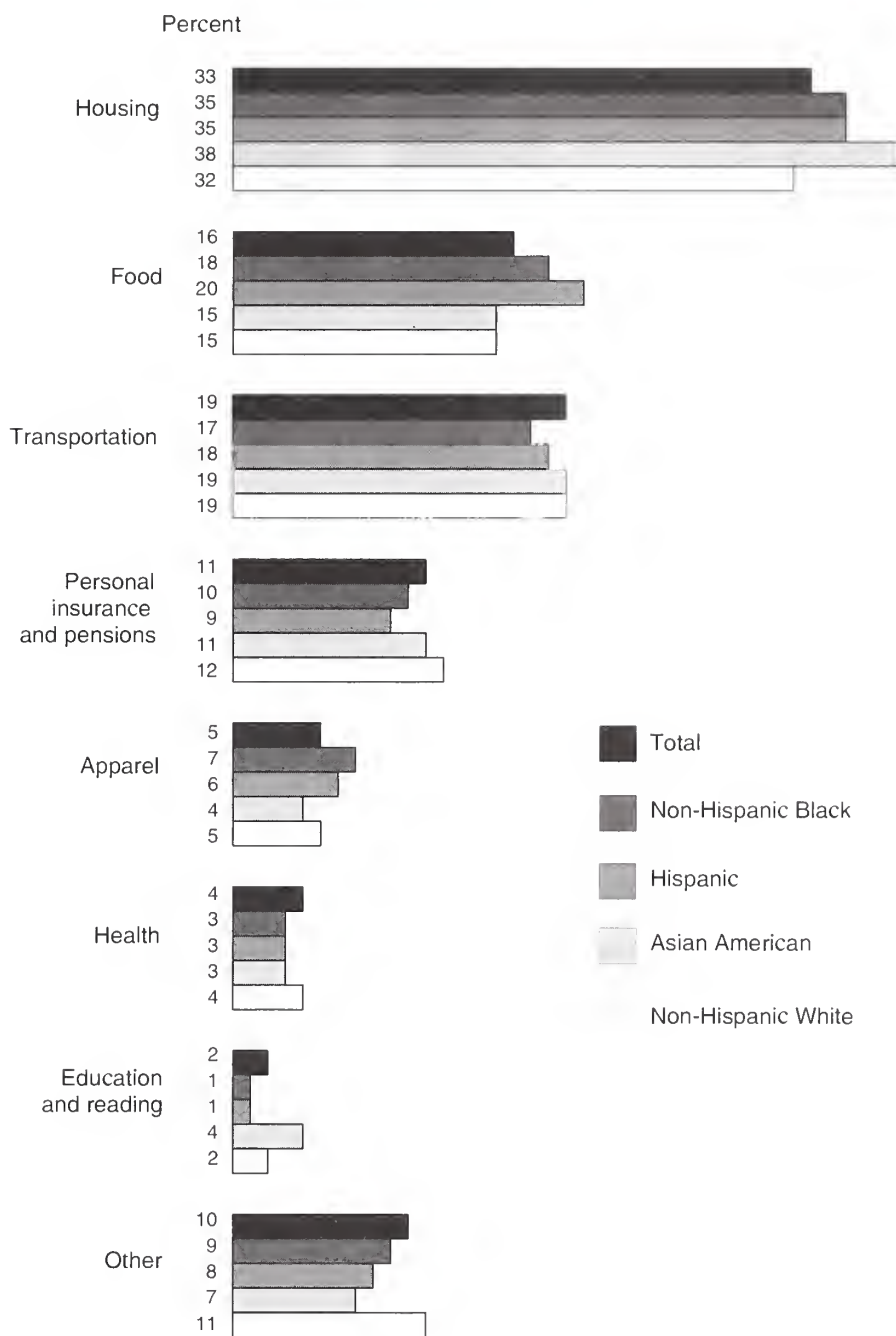
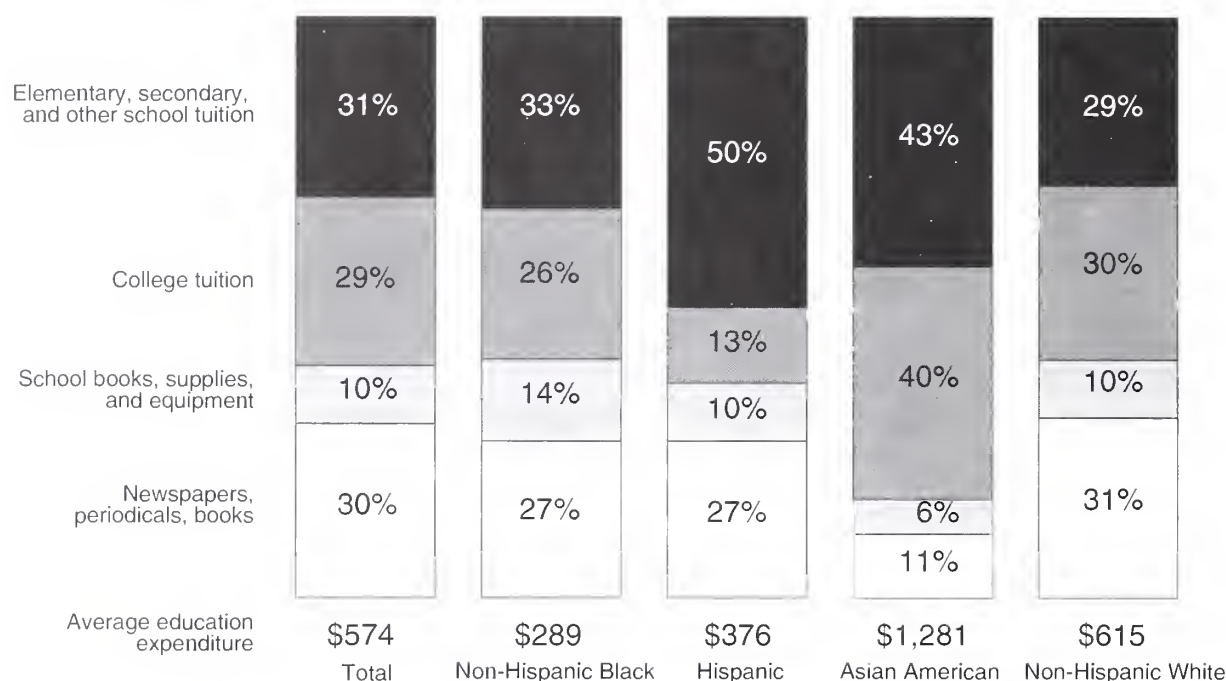


Figure 2. Average shares of education and reading expenditures for households headed by baby boomers, 1990-91



Conclusion

The primary finding of this study is that on a **household** basis, non-Hispanic Black boomers had lower expenditures than did Hispanic, Asian American, and non-Hispanic White boomers. However, the expenditure shares used for different goods and services were similar for these boomers. On a **per person** basis, non-Hispanic Black boomers had lower expenditures than other boomers for housing, total food, food at home, food away from home, transportation, health care, and education and reading. Personal insurance and pensions, apparel, and miscellaneous expenditures were lower for Hispanics than for other boomers. Non-Hispanic Whites spent more per person for all categories except education, for which Asian Americans spent more.

Compared with previous generations, boomers have been characterized as one of the more educated cohorts in our society (2,3,6). However, distinct educational profiles are evident among these householders. Boomer householders allocate their education and reading dollars differently—perhaps a reflection of the values they place on education. Asian baby-boomer householders spent 2 to 4 times more for education than did other boomers. They were more likely than other boomer householders to be college graduates and to use greater shares of their education and reading dollar for college tuition. Although Hispanic boomers were more likely than other boomers to have less than a high school education, they used greater shares of their education and reading dollar for their children's tuition (for elementary, secondary, and other schools).

When housing tenure and housing expenditures are considered, it becomes evident that ethnic and racial minority boomers are less likely than non-Hispanic White boomers to use their housing dollar to increase net worth. If home equity remains an insignificant portion of their net worth, Black, Hispanic, and Asian boomers may be at a further economic disadvantage in the future, during retirement. In addition to using the equity in their homes to help with current financial needs (such as college tuition), homeowners may also use it to supplement their income after retirement provided sufficient home equity is available.

The analysis of expenditures by baby boomers' ethnic and racial characteristics indicates differences in economic well-being and, therefore, a need to tailor assistance to meet current and future needs of the most vulnerable. Public and private efforts to raise educational levels could mean higher incomes and greater contributions to pensions, a major source of retirement income.

This, in turn, could reduce dependence on public sources of income. Efforts to increase the likelihood of home ownership by Black, Hispanic, and Asian boomers will help in the short and long term. Decisions that address the demands boomers could place on public financial resources and how society can respond should be considered long before this group reaches its "golden years."

References

1. Bennett, C.E. 1992. *The Asian and Pacific Islander Population in the United States: March 1991 and 1990*. Current Population Reports, Population Characteristics. Series P20-459. U.S. Department of Commerce, Bureau of the Census.
2. Bouvier, L.F. and De Vita, C.J. 1991. *The Baby Boom—Entering Midlife*. Population Bulletin, Vol. 46, No. 3. Population Reference Bureau, Inc., Washington, DC.
3. The Congress of the United States, Congressional Budget Office. 1993. *Baby Boomers in Retirement: An Early Perspective*.
4. Courtless, J.C. and Hammonds-Smith, M.M. 1993. Reading and educational expenses in minority households headed by baby boomers. In: E.P. Davis and J.G. Gilbreth, eds. *Diversity Among Economically Vulnerable Households*, pp. 111-112. Proceedings of the 1993 Pre-Conference Workshop, Family Economics-Home Management Section of the American Home Economics Association. [Orlando, FL, June 1993].
5. Hollmann, F.W. 1993. *U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991*. Current Population Reports. Series P25-1095. U.S. Department of Commerce, Bureau of the Census.
6. Kingson, E. 1992. *The Diversity of the Baby Boom Generation: Implications for Their Retirement Years*. American Association of Retired Persons, Washington, DC.
7. U.S. Department of Commerce, Bureau of the Census. 1992. *1990 Census of Population: General Population Characteristics, United States*. 1990 CP-1-1.
8. U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Expenditure Surveys: 1990-1991 Interview Survey Public Use Tapes and Documentation*.
9. U.S. Department of Labor, Bureau of Labor Statistics. 1991. *Consumer Expenditure Survey, 1988-89*. Bulletin 2383.
10. Wagner, J. and Soberon-Ferrer, H. 1990. The effect of ethnicity on selected household expenditures. *The Social Science Journal* 27(2):181-198.

Residential Energy Trends

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The typical U.S. household spent \$1,172 on residential energy in 1990, up 28 percent from 1980. During this period, prices rose 40 percent, whereas consumption per household declined 14 percent. The U.S. Department of Energy's 1990 Residential Energy Consumption Survey was used to provide household consumption and expenditure data. Natural gas accounted for 53 percent of residential consumption and 25 percent of expenditures, whereas electricity accounted for 33 percent of consumption and 65 percent of expenditures. Increased wood-stove efficiency and increased environmental regulations contributed to a decline in wood consumption since 1984. New homes and new appliances use considerably less energy than older ones. Energy conservation programs, called demand-side management, are being offered by electric utilities to 71 percent of the Nation's single-family households as a way of reducing consumption. Unfortunately, the percentage of customers participating is very low. Additional examples of energy-saving measures are provided.

Increased energy efficiency reduces consumers' energy expenditures, air and water pollution, and the Nation's dependence on foreign energy sources. Between 1980 and 1990, there was a 14-percent decline in residential energy use per household. This decline resulted, in part, from greater efficiency in new appliances and home construction methods and increased energy conservation, as well as fewer people per household.

Most single-family households are served by utilities that offer energy conservation programs. Consumers who take advantage of these programs will lower their utility expenditures and help the country conserve energy resources. Consumers need to be aware of the importance of participating in these programs.

This article presents findings from the 1990 Residential Energy Consumption Survey and other sources that describe

the trends in residential energy prices, expenditures, and consumption. Also presented are improvements in the energy efficiencies of new homes and appliances, energy conservation programs, and new technologies.

The 1990 Residential Energy Consumption Survey (RECS), conducted by the U.S. Department of Energy's Energy Information Administration (EIA), is the only comprehensive source of national data on energy-related information for the residential sector. The RECS consists of two main parts: the Household Survey and the Energy Suppliers Survey. The Household Survey uses personal interviews to collect information on the housing unit. The Energy Suppliers Survey collects energy consumption information from household billing records maintained by the energy suppliers (12). The RECS was also conducted in 1987, 1984, and annually from 1978 to 1982 (13).

Prices and Expenditures

Between 1980 and 1990, the price of residential fuels increased 40 percent, according to the Consumer Price Index (CPI-U). Natural gas increased 48 percent; electricity, 55 percent; and fuel oil, 12 percent. These increases were smaller than the increase for all items during the decade. The overall CPI increased by 59 percent (17).

In 1990, U.S. expenditures for residential energy averaged \$1.172 per household (table 1). Higher-than-average expenditures were reported by households:

- in single-family homes
- in owned homes
- with annual incomes of \$35,000 or more
- with a householder age 35 to 59 years (12)
- residing in the Northeast (13)

Lower-than-average expenditures were reported by households:

- in multifamily housing units
- in rented homes
- with annual incomes under \$20,000
- with a householder under 35 or over 59 years old (12)
- residing in the West (13)

Householders age 60 years and over had the highest expenditures per household member (\$602 compared with \$450 for all age groups) because of their small household size. Electricity accounted for the largest share of household energy expenditures, 65 percent; followed by natural gas, 25 percent; fuel oil, 7 percent; and other (liquefied petroleum gas (LPG) and kerosene), 3 percent (fig. 1) (12). The average household electricity expenditure in 1990 was \$761. Households that used natural gas

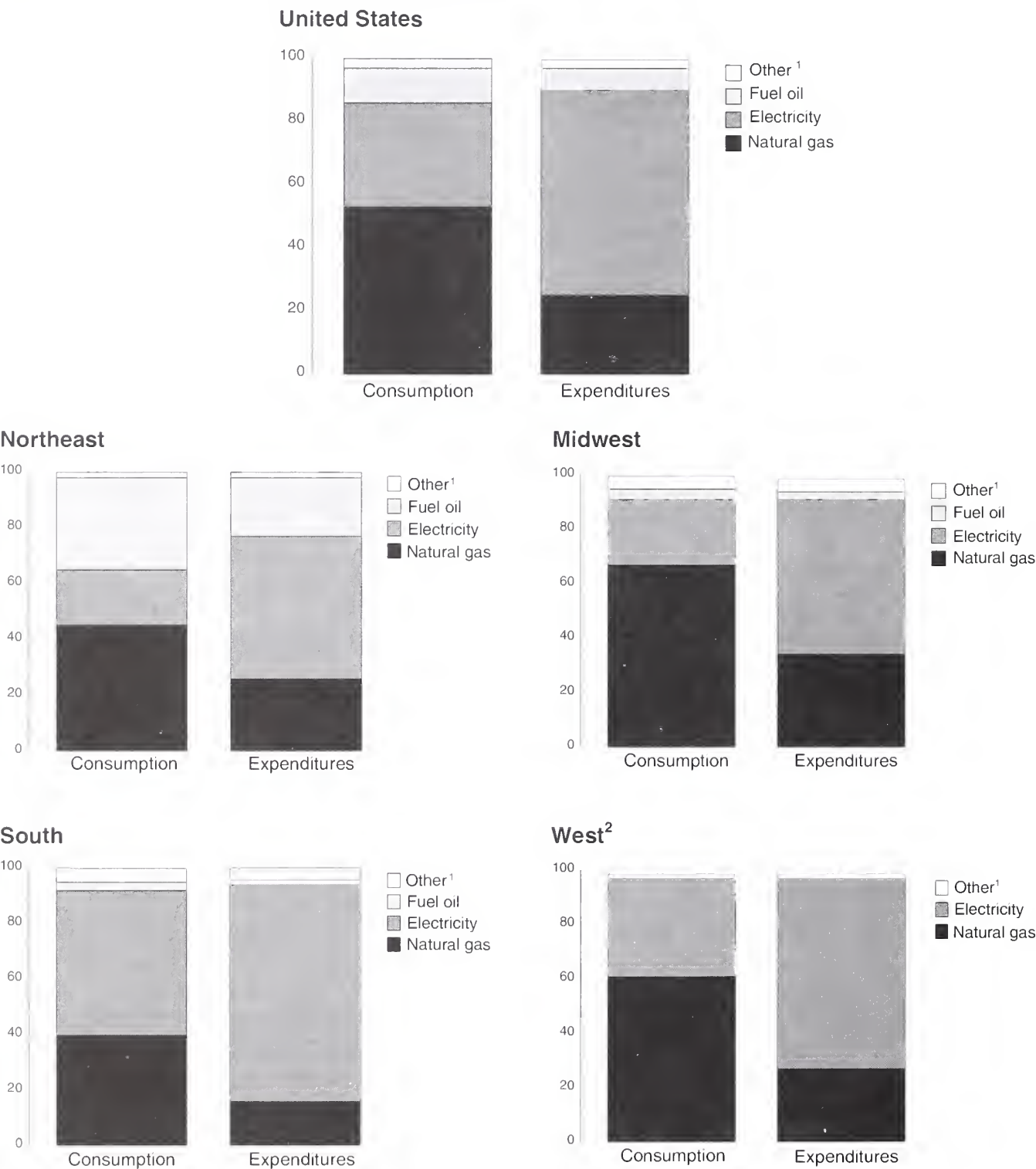
Table 1. Average household expenditure on major energy sources,¹ by region, 1990

Characteristics	United States	Region			
		Northeast	Midwest	South	West
<i>Dollars</i>					
Total region	1.172	1.471	1.166	1.151	920
Type of housing unit					
Single family	1.321	1.707	1.298	1.277	1.072
Mobile home	1.011	1.177	1.111	1.013	801
Multifamily (2 or more units)	815	1.084	794	744	588
Heated floor space (square feet)					
Fewer than 1,000	802	945	842	830	640
1,000 to 1,999	1.192	1.415	1.162	1.197	1.030
2,000 or more	1.605	1.908	1.441	1.576	1.373
Ownership of unit					
Owned	1.322	1.669	1.279	1.277	1.071
Rented	878	1.054	888	897	709
1990 Family income					
Less than \$10,000	888	1.044	1.016	869	612
\$10,000 to \$19,999	978	1.177	983	1.013	759
\$20,000 to \$34,999	1.115	1.373	1.158	1.100	851
\$35,000 or more	1.460	1.785	1.367	1.452	1.187
Age of householder					
Under 35 years	1.044	1.351	1.066	1.019	804
35 to 59 years	1.320	1.627	1.308	1.304	1.046
60 years and over	1.084	1.353	1.069	1.048	863

¹Major energy sources include: electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas.

Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990*, DOE/EIA-0321(90) and *Household Energy Consumption and Expenditures, 1990 Supplement: Regional*, DOE/EIA-0321(90)/S.

Figure 1. Major residential energy sources: Consumption and expenditures, 1990



¹Other includes liquified petroleum gas and kerosene; data for kerosene not available for the Midwest.

²Data for fuel oil not available.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-F of the 1990 Residential Energy Consumption Survey (RECS). Tables 19 and 20 and RECS Public Use Data Files

spent \$472 on that energy source, whereas households that used fuel oil spent \$652 (table 2).

Nationwide, expenditures for residential energy rose 28 percent between 1980 and 1990. The increase varied by region with the smallest increase, 16 percent, occurring in the Northeast (where expenditures are the highest) and the largest increase, 53 percent, occurring in the West (where expenditures are the lowest). Expenditures increased 28 percent in the Midwest and 31 percent in the South during this period (12,13).

Consumption

In 1990, energy consumption averaged 98.1 million BTU's¹ per household (tables 2 and 3). Residential energy consumption patterns were similar to expenditure patterns in 1990, with one notable exception. Households in the Midwest consumed the greatest amount of residential energy—24 percent more

than the U.S. average (fig. 2). Compared with households in the Northeast, Midwestern households consumed over 2 million more BTU's in 1990, but spent \$305 less (table 1) (13).

Energy use among U.S. households varies according to climate. Whereas 71 percent of Americans live in temperate climate zones, 11 percent live in regions that are extremely cold, and 18 percent live in regions that are extremely hot (12). Nearly half of household energy goes to space heating (fig. 3) (10). Households living in the coldest climate zone use 47 percent more total energy than those in the hottest zone because heating requirements in winter exceed cooling requirements in summer (12). The amount of heated or cooled floorspace, the type of housing unit, and the energy source used for heating are other factors that influence energy use.

The most important use of electricity in U.S. households is for appliances, which consume 46 percent of all residential electric energy. Natural gas is used mainly for heating the home (69 percent) (table 4).

Nationwide, residential energy use per household declined by 14 percent between 1980 and 1990. By region, the smallest decline was in the West (10 percent) and the largest was in the South (16 percent) (12,15). Efficiency and energy conservation were contributing factors. Also, the average number of people per household fell from 2.76 in 1980 to 2.63 in 1990—fewer people per household usually means less energy is used (14).

Of the major household energy sources, natural gas accounted for 53 percent of total energy consumption in 1990; electricity, 33 percent; fuel oil, 11 percent; and other, 3 percent (fig. 1). Electricity was used by nearly every U.S. household in 1990, and natural gas was used by 61 percent. The other major energy sources—fuel oil, LPG, and kerosene—were used by 12 percent, 9 percent, and 6 percent, respectively (12). These proportions were nearly identical in 1980 (15). LPG and kerosene are used mainly as heat sources in rural areas.

¹A BTU, British thermal unit, is the amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit at normal atmospheric pressure.

Table 2. U.S. household energy consumption and expenditures, 1990

Energy source	Households	Total consumption	Average ¹ consumption per household	Total expenditures	Average ¹ expenditures per household
	(Million)	(Quadrillion BTU)	(Million BTU)	(Billion dollars)	(Dollars)
All major energy sources	94.0	9.2	98.1	110.2	1,172
Electricity ²	94.0	3.0	32.3	71.5	761
Natural gas	57.7	4.9	84.2	27.3	472
Fuel oil	11.7	1.0	83.4	7.6	652
LPG	8.2	0.3	34.1	3.1	381
Kerosene	5.3	0.1	12.3	0.6	116

¹Averages are calculated with only those households using the energy source.

²Electricity consumption is measured in terms of the amount delivered to the household; no adjustment is made to account for the primary fuels used to produce electricity or for the losses in the transmission and distribution of electricity.

Note: Totals may not equal sum of components due to independent rounding.

Source: U.S. Department of Energy, Energy Information Administration, 1993, *Highlights: Household energy consumption and expenditures 1990, Monthly Energy Review*, August issue.

Between 1980 and 1990, the number of residential gas customers grew 15 percent, while the sale of residential gas declined by 7 percent. Per capita gas consumption decreased from 90 million BTU's in 1980 to 78 million BTU's in 1990—a 13-percent decline (1). The percentage of households using gas for their main heating source remained constant over the decade at 55 percent (table 5).

Energy Efficiency

New Construction

In a RECS sample of new homes, those built in 1988-90 consumed 53 percent more total energy, compared with homes built in 1985-87. This was the first increase in energy consumption per household in new construction since 1950-59. It was due to the increased use of natural gas,² larger house size, the increased level of services in the newer homes, and more appliances, such as microwave ovens, refrigerators, dishwashers, waterbed heaters, hot tubs or spas, and personal computers (12). Between 1980 and 1990, ownership of microwave ovens increased from 14 to 79 percent of all households; ownership of color televisions, from 82 to 96 percent of households; central air conditioning, from 27 to 39 percent of households; and dishwashers, from 37 to 45 percent of households (table 6). In general, however, the older the home, the greater the energy consumption. Homes built in 1939 or earlier use 63,000 BTU's per square foot, compared with 42,000 BTU's per square foot for homes built in 1988 or later (12).

²A house heated by gas uses more energy per square foot than one heated by electricity. However, expenditures per square foot are similar (10).

Table 3. Average household consumption of major energy sources,¹ by region, 1990

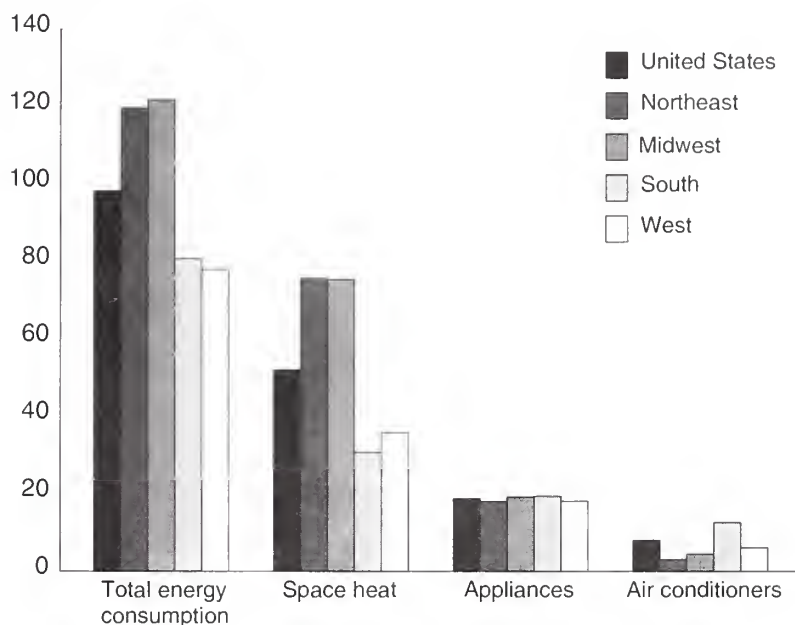
Characteristics	United States	Region			
		Northeast	Midwest	South	West
Million BTU's					
Total region	98.1	119.6	121.7	80.6	77.8
Type of housing unit					
Single family	110.9	137.6	136.4	91.4	90.3
Mobile home	78.0	83.1	96.6	61.8	76.4
Multifamily (2 or more units)	68.5	91.0	85.9	47.5	49.0
Heated floor space (square feet)					
Fewer than 1,000	63.6	75.6	81.3	55.3	52.7
1,000 to 1,999	98.5	115.4	121.8	83.5	86.4
2,000 or more	140.8	155.6	155.4	115.7	122.8
Ownership of unit					
Owned	110.5	134.5	131.3	90.3	91.2
Rented	73.7	88.1	98.2	61.0	59.2
1990 family income					
Less than \$10,000	79.9	95.0	116.7	63.1	54.5
\$10,000 to \$19,999	83.7	104.1	103.3	70.1	66.5
\$20,000 to \$34,999	93.4	108.0	115.5	78.8	76.1
\$35,000 or more	118.3	140.2	141.5	99.5	95.2
Age of householder					
Under 35 years	86.9	107.0	112.2	69.3	69.0
35 to 59 years	107.0	127.8	132.3	88.9	87.8
60 years and over	96.2	119.2	116.4	79.0	73.0

¹Major energy sources include: electricity, natural gas, fuel oil, kerosene, and liquified petroleum gas.

Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990, DOE/EIA-0321(90)* and *Household Energy Consumption and Expenditures, 1990 Supplement: Regional, DOE/EIA-0321(90)/S*.

Figure 2. U.S. household energy consumption, by region, 1990

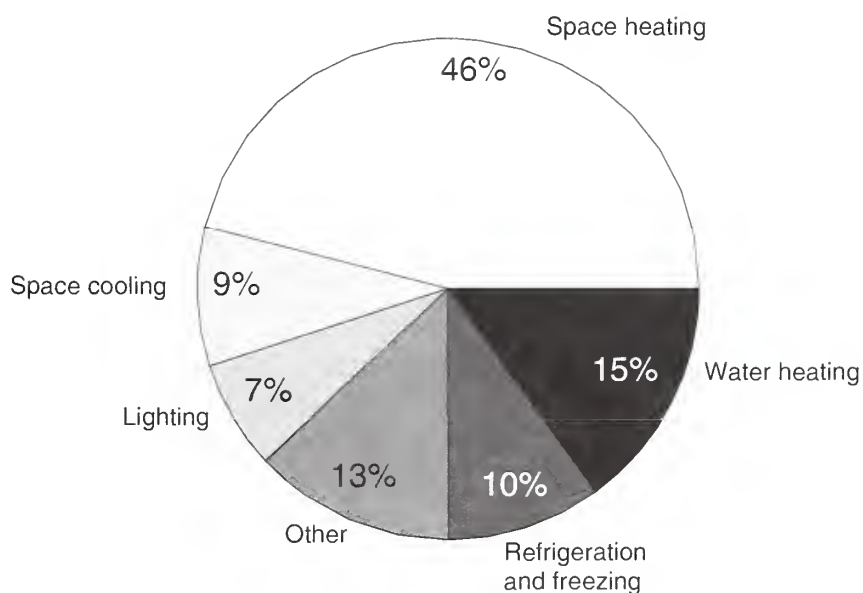
Million BTU's



Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990, DOE/EIA-0321(90)*.

Nearly half of household energy goes to space heating (fig. 3).

Figure 3. Residential energy by end use, 1989



Source: U.S. Congress, Office of Technology Assessment, 1992, *Building Energy Efficiency, OTA-E-518*.

Table 4. U.S. residential end-use consumption of electricity and natural gas, 1990

Appliance/end use	Electricity consumption		Natural gas consumption	
	Million units	Percent	Million units	Percent
Total households	94.0	100.0	57.7	100.0
Air conditioning	60.3	15.8	0.4	0.2
Water heating	36.1	11.2	50.3	23.9
Space heating	37.2	9.9	52.7	69.3
Appliances	94.0	46.5	40.0	6.8
Refrigerators	112.6	16.4	NA	NA

Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990*, DOE/EIA-0321(90).

Appliances

Since 1978, manufacturers have been required to test their appliances for energy efficiency under U.S. Department of Energy-specified testing methods. New household appliances are considerably more energy efficient than their predecessors. The great number of old appliances still in use, however, masks the energy improvements of the newer models. Using the 1990 RECS data, the EIA estimated the size of energy-efficiency improvements and savings that could have been realized if the entire 1990 appliance stock had been replaced by new models. The analysis included manufacturers' data on energy efficiency for refrigerators, freezers, room air conditioners, central air conditioners, natural gas furnaces, and heat pumps (12).

The analysis showed that if the entire 1990 stock had been replaced by new models, as much as 835.7 trillion BTU's per year, or 9 percent of total consumption, could have been saved. Energy-efficiency gains varied by appliance type, from a gain of 70 percent for freezers and 66 percent for refrigerators to 14 percent for natural gas furnaces (fig. 4) (12).

Wood (12)

Unlike other energy sources, wood is not billed by utilities. Therefore, precise data on household expenditures for wood are not available. The RECS started collecting data on wood, based on respondent recall, in 1980, when 42.7 million cords were burned. Consumption peaked in 1984 at 49.0 million cords and declined to a low of 29.1 million cords burned in 1990. Most of the decline occurred between 1987 and 1990, when wood consumption dropped 32 percent.

Between 1987 and 1990, the number of households using wood as their main space-heating source declined from 5.0 million households to 3.9 million. Most households (82 percent) that heated with wood had an alternative heating system. Among households burning wood for main space heating, average consumption declined from 4.7 cords in 1987 to 3.9 cords in 1990. There was also a decline in the use of wood for secondary heating, such as burning wood in a fireplace. Households used an average of 1.1 cords of wood in 1987 and 0.7 cords in 1990 for secondary heating.

Increased wood-stove efficiency is a major factor contributing to the reduced use of wood since 1987. The Environmental Protection Agency (EPA) established efficiency standards for wood stoves manufactured after July 1, 1988. These new stoves are, on average, 15 percent more efficient than older stoves.

The use of wood has also been reduced by increased environmental regulation. In recent years, State and local regulations have been passed that limit particulate emission by restricting the burning of wood.

Table 5. Saturation of selected natural gas appliances and end uses, U.S. households, 1980-90

Appliance/ end use	Saturation (percent of all households)	
	1980	1990
Main space heating	55	55
Water heating	54	53
Range	46	34
Oven	40	35
Clothes dryer	14	16

Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990*, DOE/EIA-0321(90).

Table 6. Saturation of selected electrical appliances and end uses, U.S. households, 1980-90

Appliance/ end use	Saturation (percent of all households)	
	1980	1990
Refrigerator (1)	86	84
Refrigerator (2 or more)	14	15
Central air conditioning	27	39
Room air conditioning	30	29
Water heating	32	37
Main space heating	18	23
Color television	82	96
Black and white television	51	31
Clothes dryer	47	53
Range	54	58
Microwave oven	14	79
Dishwasher	37	45
Clothes washer	75	76
Heated swimming pool	.6	1.1

Source: U.S. Department of Energy, Energy Information Administration, 1992, *Housing Characteristics 1990*, DOE/EIA-0314(90).

Energy Conservation Programs

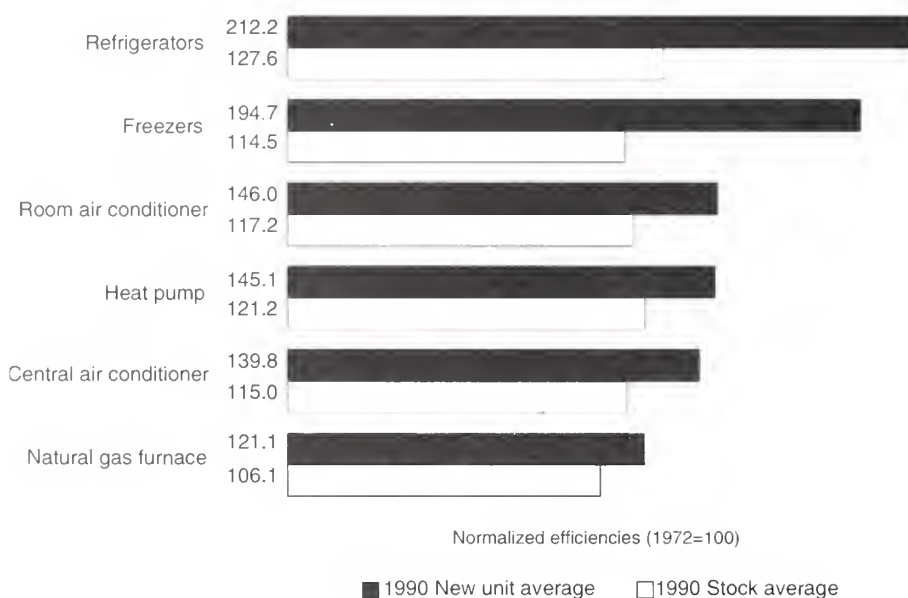
The demand for electricity is projected to grow by about 2 percent per year and to account for between 35 and 50 percent of the growth in total end-use energy consumption by 2010 (8). Many electric utility companies offer their customers incentives to reduce peak-demand growth or to reduce electrical energy consumption. These energy conservation programs, known as Demand-Side Management (DSM) programs, include peak-demand shaving, load shifting, and strategic load and energy growth (12). Utilities, State regulators, and consumer groups now regard conservation and efficiency as the preferred solution to the electric utility's economic and environmental problems related to meeting new electricity demands (4).

About 30 States, led by California, Oregon, New York, Massachusetts, and Maine, have changed their utilities' rate structures so that investments in demand-side management will be as profitable as investments in new power plants (5). Since the early 1980's, various rate commissions have allowed utilities with more energy-efficient customers to keep a percentage of the amount that those customers otherwise would have spent (2).

Consequently, utilities have been spending large sums of money encouraging customers to conserve energy so that increasing needs for electricity can be met without building costly new generating plants. Utilities invested about \$1 billion on demand-side programs in 1990 and about \$1.5 billion in 1991 (5). The Electric Power Research Institute (EPRI) estimates that investments in energy-efficient technologies can cut electricity use by about 30 percent (9).

Many electric utility companies offer their customers incentives to reduce peak-demand growth or to reduce electrical energy consumption.

Figure 4. Energy efficiency comparison: Appliances in use versus new appliances, 1990



Source: U.S. Department of Energy, Energy Information Administration, 1993, *Household Energy Consumption and Expenditures, 1990*, DOE/EIA-0321(90).

The 1990 RECS provided the first overview of household participation in DSM programs and the potential effects of DSM participation in the future. Since the great majority who participate in DSM programs do so voluntarily, they tend to be more cost- or energy-conscious than the general population. As a result, differences in consumption between participants and nonparticipants can be attributed to both the effects of DSM programs and the cost- or energy-consciousness of the participants (12).

There are two basic types of DSM programs: (1) those that influence the use of current energy-using equipment and (2) those that encourage the installation of improved equipment and technologies (8). The following types of DSM programs were identified in the 1990 RECS:

- A rebate to purchase a more energy-efficient appliance, such as a heat pump or air conditioner. More efficient appliances are more costly than those that are less efficient. Since consumers tend to buy the cheapest (and least efficient) appliance model available, rebate programs are designed to reduce the net cost differential between the more efficient model and the less efficient model.
- A load-control device on an appliance such as a water heater or air conditioner. The utility installs the device, which switches off the unit during peak periods, delaying electricity demand to an off-peak period.
- A utility-sponsored energy audit of a house, which determines the most economical means of reducing energy consumption for a particular household.

- Other utility-sponsored conservation programs, such as window caulking or insulation in walls or attics, which reduce energy consumption (12).

Of the 4.6 million households that participated in DSM programs in 1990 (7 percent of those eligible), 26 percent obtained rebates, 35 percent accepted load-control devices, 24 percent had energy audits of their homes, and 28 percent participated in another type of utility-sponsored conservation program (12). (Some households were involved in more than one type of program.)

The EIA also collects data from electric utilities on their DSM programs. In 1990, over one-fourth of utilities offered DSM programs that reduced peak demand by an estimated 5 percent (12). The EIA plans to modify future DSM surveys to provide additional information that can be used to assess and evaluate program impact and cost-effectiveness (8).

The impact of DSM programs is difficult to assess because electricity savings cannot be directly measured—they must be estimated. Also, DSM estimates involve predicting and measuring human behavior (8). In addition, any load reduction or energy savings that is not directly attributable to DSM programs, such as those that result from rising electricity prices, legislated efficiency standards for buildings and appliances, and technological improvements in the appliance industry, is not defined as DSM-related impacts (8). However, the data suggest that DSM program participants were more likely to be middle-age, relatively more affluent, better educated, and more likely to own their homes than nonparticipants. Their houses were more likely to be newer and larger than those of non-participants (14).

Specific Examples of Energy Conservation Measures

Lighting

Compact fluorescent bulbs that use 60 to 85 percent less electricity than incandescent light bulbs are now available. The EPRI estimates that one-sixth of all U.S. electricity use could be saved by converting homes and offices to efficient lighting (4). In addition, an Ohio utility, American Electric Power, is underwriting the development of the E Lamp, which provides light with radio waves, requires very little electricity, and fits any existing fixture. When perfected, the E Lamp should cost less to use than compact fluorescent bulbs (2).

Refrigerators

The refrigerator is another big user of energy in a home (fig. 3). The Environmental Protection Agency (EPA) and utilities nationwide sponsor a program called the Golden Carrot, offering a monetary reward to the manufacturer of the most energy-efficient electric refrigerator (9). The winning design in 1993 was both energy-efficient and environmentally friendly. Comparable in price and looking like a standard side-by-side refrigerator, the winner uses about 30 percent less electricity and no ozone-destroying chlorofluorocarbons (CFC's) (3).

Electric Motors and Insulation

A new electric motor design with a variable-speed drive could save 44 percent of the power used by motors or 22 percent of total U.S. electric use. Heavily insulated refrigerators and freezers can use as much as 90 percent less electricity than older models. Improved designs and better insulation have also decreased the amounts of electricity used by televisions, photocopiers, and computers relative to older models (4).

The Low Income Home Energy Assistance Program (LIHEAP) (16)

The U.S. Department of Health and Human Services (HHS) has administered Federal energy assistance programs since fiscal year (FY) 1980. The purpose of the LIHEAP is to assist eligible households in meeting the cost of home heating and/or cooling. In FY 1992, LIHEAP provided \$1.5 billion in energy assistance through grants made by HHS to the 50 States and the District of Columbia, 120 Indian tribes and tribal organizations, and 6 U.S. territories.

In FY 1992, LIHEAP funds were used for heating and cooling assistance, energy crisis intervention or crisis assistance, low-cost residential weatherization or other energy-related home repair, and administration. The LIHEAP heating benefit averaged \$168 per household and ranged from \$39 to \$468, whereas the cooling benefit averaged \$59 per household and ranged from \$30 to \$288.

The households assisted by the States in FY 1992 included:

Type of assistance	Number of households assisted
Heating	5,906,292
Cooling	384,468
Winter/year-round crisis	950,275
Summer crisis	25,270
Weatherization	106,066

Some households received more than one type of LIHEAP assistance.

Two income standards are used to determine household eligibility for LIHEAP assistance:

- Categorical eligibility for households with one or more members receiving Aid to Families with Dependent Children, Supplemental Security Income payments, food stamps, or certain needs-tested veterans' and survivors' payments.
- Income eligibility for households with incomes that do not exceed the greater of an amount equal to 150 percent of the poverty level for their State, or an amount equal to 60 percent of the State median income.

Air Conditioning

Increased efficiency in air conditioning during the 1980's was due to larger condenser and evaporator coils, better motors, improved insulation, reduced airflow-path resistance, and better fan

blade design (10). Air conditioning will become more efficient in the future when systems should be able to cool without compressors, which are the big draw on power in conventional units (2).

Wind Power

California's Pacific Gas and Electric has become the Nation's largest user of wind power (2). There are now over 16,000 windmills in the United States, mostly in California. Windmills being built today are smaller and more reliable than their big, complex predecessors. Two factors have increased sales: (1) new laws requiring utilities to offer fixed purchase-price contracts to suppliers of wind electricity and (2) The National Energy Policy Act of 1992, which permits a 1.5 cent per kilowatt-hour tax credit for generators of electricity from renewable sources (7).

Solar Energy

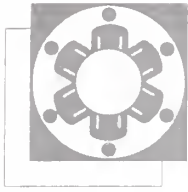
When affordable converters are marketed, solar-electric conversion may become commonplace by the early 21st century. Households in the Southwestern part of the United States could obtain most of their power needs from roof-mounted solar systems, and households in other parts of the country, up to half their power needs (2).

Shade Trees

Properly placed trees and shrubs can provide both shade and wind protection. Landscaping can help conserve energy and save money by reducing air conditioning and heating costs. Strategically placed plants and structures such as walls, berms, and fences can save homeowners as much as 30 percent on their utility bills according to U.S. Department of Energy estimates (6).

References

1. American Gas Association. 1993. *Gas Data Book*. Catalog #F00992.
2. Easterbrook, G. 1993. The future of electric power. *The Atlantic* 272(1):42-46.
3. Haggerty, M. 1994. High-tech dominates new household products. *The Washington Post*, January 29 issue.
4. Hinchman, S. 1993. Urban power. *Buzzworm: The Environmental Journal* V(1):20.
5. Klebnikov, P. 1992. Demand-siders. *Forbes* 150(10):134,136.
6. Kourik, R. 1993. Made in the shade. *Garbage* V(3):44-49.
7. Marshall, E. 1993. Is environmental technology a key to a healthy economy? *Science* 260(5116):1886-1888.
8. Prete, L., Gordon, J., and Bromley, L. 1992. Electric utility demand-side management. *Electric Power Monthly*. April issue, pp. 19-33.
9. Skerrett, P.J. 1993. The real cost of saving electricity. *Technology Review* 96(2):12-13.
10. U.S. Congress, Office of Technology Assessment. 1992. *Building Energy Efficiency*. OTA-E-518.
11. U.S. Department of Energy, Energy Information Administration. 1993. Highlights: household energy consumption and expenditures 1990. *Monthly Energy Review*, August issue.
12. U.S. Department of Energy, Energy Information Administration. 1993. *Household Energy Consumption and Expenditures 1990*. DOE/EIA-0321(90).
13. U.S. Department of Energy, Energy Information Administration. 1993. *Household Energy Consumption and Expenditures 1990 Supplement: Regional*. DOE/EIA-0321(90)/S.
14. U.S. Department of Energy, Energy Information Administration. 1992. *Housing Characteristics 1990*. DOE/EIA-0314(90).
15. U.S. Department of Energy, Energy Information Administration. 1987. *Residential Energy Consumption Survey: Trends in Consumption and Expenditures, 1978-1984*. DOE/EIA-0482.
16. U.S. Department of Health and Human Services, Administration for Children and Families. 1994. *Low Income Home Energy Assistance Program: Report to Congress for Fiscal Year 1992*.
17. U.S. Department of Labor, Bureau of Labor Statistics. 1992. *CPI Detailed Report*.



Job Search Methods, 1970-92

This article presents data from the 1992 Current Population Survey (CPS), compiled by the Bureau of Labor Statistics, and analyzes trends in job search behavior since the 1970's. In the CPS, respondents are asked to describe what they have been doing recently to search for work. There are six categories of active job search listed in the CPS:

- Checked with public employment agency
- Checked with private employment agency
- Checked with employers directly
- Checked with friends or relatives
- Placed or answered ads
- Other methods

Other active methods may include using a college placement office, a professional register, or a union hall.

An individual will be classified as either unemployed or not in the labor force, depending on whether active or passive job search methods were used. Respondents who cite any of the active job search methods are considered unemployed jobseekers, whereas respondents using only passive methods are classified as not in the labor force. Passive methods of search include job training, other course work, and merely reading the ads.

For all groups of jobseekers, the most common job search methods used in 1992 were "checked with employer directly" (calling, visiting, or writing prospective employers), used by 74 percent and "placed or answered ads," used by 42 percent. Public employment agencies were used by 23 percent and private agencies, by 9 percent (see table, p. 32).

Job search methods vary by demographic groups. For example, jobseekers of Hispanic origin often asked friends or relatives about job openings. One-third of Hispanic jobseekers, compared with 22 percent of Black and 24 percent of White, checked with friends or relatives. Because English is often not their primary language, Hispanic jobseekers may find it more efficient to use informal networks of friends and relatives to find work.

Jobseekers looking for part-time work searched less intensively than did jobseekers looking for full-time work. People who wanted a part-time job used all job search methods less often in their job search.

Job losers (people who lost their jobs for reasons other than layoff) cited public employment agencies more than any other group of jobseekers. Job losers are required to register with a public employment agency to qualify for unemployment insurance benefits. Reentrants (people who seek a job after a period of absence from the labor force) and new entrants to the labor force may be less likely to register at public employment agencies.

Younger and older jobseekers used fewer search methods, on average, than did middle-age (ages 35 to 54) jobseekers. In 1992, jobseekers ages 16 to 19 and 65 years old and older used 1.5-1.6 methods, on average, whereas middle-age jobseekers used 1.9 methods.

Since 1970, the percentage of jobseekers placing or answering ads has nearly doubled, from 23 percent in 1970 to 42 percent in 1992. This trend has coincided with an increase in the volume of help-wanted advertising during the period. Growth in ad usage as a search method may reflect the gradual shift of the economy away from manufacturing toward service industries. Service industries tend to advertise openings more heavily than manufacturing. Also,

Unemployed jobseekers by job search methods, by selected characteristics, 1992 annual averages

Characteristic	Public employment agency	Private employment agency	Checked with employer directly	Checked with friends or relatives	Placed or answered ads	Other methods
Total	22.6	9.3	74.3	23.7	41.7	5.3
Age (years)						
16 - 19	11.6	4.0	81.5	18.1	27.5	3.5
20 - 24	21.8	8.7	74.8	22.2	42.1	3.8
25 - 34	26.2	9.9	73.2	24.4	45.6	4.5
35 - 44	25.9	11.4	72.9	25.7	45.0	6.6
45 - 54	25.3	12.4	71.7	26.6	44.8	8.2
55 - 64	22.4	10.2	70.7	26.4	43.9	7.4
65 and older	15.2	6.9	68.6	24.0	37.6	7.4
Gender						
Men	24.7	9.8	74.8	26.6	40.4	6.2
Women	20.0	8.7	73.8	20.0	43.3	4.1
Race						
White	21.9	9.0	74.8	23.9	43.3	5.7
Black	25.0	10.3	73.9	21.5	35.4	4.0
Hispanic origin	22.1	8.6	73.7	32.8	38.0	3.6
Seeking						
Full-time work	25.6	10.5	74.4	25.3	43.9	5.4
Part-time work	9.4	3.9	73.9	16.3	32.0	4.5

Source: Ports, M.H., 1993, *Trends in job search methods, 1970-92, 1993, Monthly Labor Review* 116(10):63-67.

jobseekers in the expanding white-collar occupations tend to use advertisements as a search method more than jobseekers with blue-collar occupations.

The shift from blue-collar jobs may also affect the use of public employment agencies. People with manufacturing jobs tend to use public employment agencies more often than do jobseekers with other occupations. In addition, there has been a decline in the proportion of unemployed workers receiving unemployment insurance benefits over the last decade. Because recipients of unemployment benefits must be registered with a public employment agency,

the reduced claims activity could be a factor in the drop in use of public employment agencies.

There was a dramatic change in the age composition of the population between 1970 and 1992 as the baby boomer generation grew older. In 1970, more than half of all jobseekers were between the ages of 16 and 24. In 1992, the largest numbers of jobseekers were between the ages of 25 and 44. All age groups showed an increase in the use of placing or answering ads and a decrease in the use of public employment agencies between 1970 and 1992.

The CPS will be redesigned in 1994 to list more categories of job search methods. The new categories will include the use of school and university employment centers, unions and professional registers, and sending resumes and filling out applications. These added categories will provide more accurate classifications of workers into unemployed or not in the labor force categories plus more detailed information on search activities.

Source: Ports, M. H., 1993, *Trends in job search methods, 1970-92, Monthly Labor Review* 116(10):63-67.

Factors Affecting Retirement Income

Older Americans may receive income from several sources including Social Security, employer-provided pension plans, savings, and current earnings. The trend in income sources for older people shows an increase in income from employer-provided pension plans. This increase reflects women's increased labor force participation in recent years and subsequent coverage of women by pension benefit plans. The percentage of total retirement income derived from employer pension plans is projected to increase from 19 percent in 1988 to 25 percent in 2018. Decisions made by today's workers, such as choice of employer and whether to change jobs, can affect both the availability and the amount of future retirement income. Trends in retirement plan design that will affect future retirees include:

- Employer-provided retirement plans are most prevalent among unionized workers in goods-producing industries. However, this sector of the labor force is in decline.
- Traditional employer pension plans reward employees who spend their entire career with one employer. However, the median job tenure for workers age 55 to 64 was only 12.4 years in 1991.
- Workers are leaving their full-time jobs at a younger age, often receiving low benefits from all sources, and because of recent changes in Social Security, they may receive even lower benefits.
- These younger retirees have increased life expectancy and will need income sources that maintain purchasing power for many years. Not all current sources of retirement benefits are indexed for inflation.

Table 1. Percent of employees offered a pension plan, by industry and by union status, 1988

Industry and union status	Percent with pension plan
Total	57.6
Industry	
Goods-producing	
Mining	70.2
Construction	35.4
Manufacturing, durable	75.1
Manufacturing, nondurable	72.5
Service-producing	
Transportation and public utilities	71.4
Wholesale trade	55.7
Retail trade	39.7
Finance, insurance, and real estate	72.9
Services	50.1
Union status	
Covered by a union contract	89.1
Not covered by a union contract	54.8

Source: Wiatrowski, W.J., 1993, *Factors affecting retirement income*, *Monthly Labor Review* 116(3): 25-35.

Retirement Income Coverage

Social Security covers nearly all working Americans, and employer-provided pension plans cover about half of them. Employer pensions are provided to almost all Federal, State, and local government employees, who account for about 17 percent of the labor force. Among workers in private industry, only half have such coverage. Furthermore, pension coverage varies with the size of the establishment: 80 percent of full-time employees in large private establishments (100 or more employees) participate in an employer retirement plan, compared with only 40 percent of the full-time workers covered by such a plan in small establishments.

Employer pensions in private industry are more common among goods-producing than service-producing industry workers. In 1988, employer pension plans were offered to 66 percent of employees in goods-producing industries, compared with 53 percent of employees in service-producing industries. However, the proportion of U.S. employment in goods-producing industries is declining, as is the number of workers in these industries (table 1).

Another determinant of pension coverage is unionization. Whereas 90 percent of union workers participate in a pension plan, only 55 percent of nonunion workers have such coverage. The trend, however, is for decreasing union presence in the workplace.

Contingent employment—such as part-time work, temporary work, employee leasing, and contracting out—limits employer pension coverage because these workers are usually not offered such benefits. Employer pension plans often include minimum annual work hour requirements before benefits are earned; these are seldom met by contingent workers.

Retirement Income and Expenditures

Although there is no fixed standard for the amount of income a retiree will need, studies have shown that income equal to at least 60 to 70 percent of pre-retirement earnings is necessary. The percentage of preretirement earnings replaced by retirement income sources is often referred to as the replacement rate.

Expenditures for households headed by people over the age of 65 are smaller than those for all households. In 1990, the average annual expenditures for all households in the United States was \$28,369, compared with \$20,895 for households headed by people 65 to 74 years of age, and \$15,448 for households headed by people over 75 years old (table 2). Taxes may be lower in older households, also.

Pension Plans

In general, no one source of retirement income is designed to provide the funds necessary for retirement. For people age 65, Social Security replaces about 45 percent of earnings for a worker who earned \$15,000 annually and about 25 percent for a person who earned \$45,000 a year.

Employer retirement plans may be *defined benefit pension plans*, which typically guarantee a specified monthly retirement benefit for life, or *defined contribution plans*, which establish

Table 2. Before-tax income and average annual expenditures, by age of household head, 1990

Item	All households	Household head age	
		65 to 74	75 and older
Before-tax income	\$31,889	\$21,501	\$15,435
Average annual expenditures ¹	28,369	20,895	15,448
Housing	8,886	6,591	5,527
Apparel and services	1,617	972	489
Transportation	5,122	3,466	2,132
Health care	1,480	2,197	2,223

¹Total is not equal to the sum of individual items because data for only selected items are shown.

Source: Wiatrowski, W.J., 1993, *Factors affecting retirement income*, *Monthly Labor Review* 116(3): 25-35.

individual accounts in which to accumulate retirement resources but do not guarantee a specific pension benefit. The buying power of some pensions can be seriously reduced over time. In 1989-90, less than 5 percent of full-time employees covered by a defined benefit pension contributed to a plan that provided cost-of-living adjustments. Defined contribution pension plans are more beneficial to employees who work for several employers. Among U.S. workers with employer retirement income coverage, 25 percent are enrolled in defined contribution plans. The most prevalent of these are savings and thrift plans, which allow employees to make voluntary contributions to an individual account, matched in whole or in part by employer funds. The entire value of the account is typically paid to the employee in a lump sum at retirement.

When income from Social Security and defined benefit pensions are added together, about 60 percent of preretirement earnings may be attained—assuming retirement at age 65 after about 30 years in the same pension plan. Income from

Social Security and defined contribution pensions is more variable but is likely to fall in the same range.

Retirement and Job Tenure

The availability of retirement plan coverage and the amount of retirement income both are dependent on an employee's service with an employer. The data from January 1991 Current Population Survey show that median job tenure with the current employer was 12.4 years for employed people age 55 to 64 (table 3). Thus, workers nearing retirement age can expect benefits from their current employer based on only about 11 years of service.

Data from the National Longitudinal Survey of Mature Women suggest a relationship between pension coverage and job tenure. Among women age 50 to 60, average job tenure was 12 years. Women who worked for an employer providing pension coverage averaged 16 years, compared with 8 years for those in a job with no pension offered. The importance of job tenure varies

according to how portable the pension program is. Social Security, for instance, provides benefits that are based on earnings and service and are not affected by workers' mobility. Defined benefit pension plans, however, are not as portable.

Vesting is the guaranteed right of a pension plan participant to future benefits. Generally, employees who have participated in a plan for 5 years are fully vested, meaning that benefits will be paid to them even if they change jobs. However, about half of U.S. adult workers have been with their current employer for less than 5 years. Employees who leave an employer after being vested either have benefits deferred until retirement or receive a cash-out of benefits earned. In 1991, 9 percent of the defined benefit pensions had a portability provision; these were generally multiemployer plans sponsored by a union.

Age at Retirement

The retirement age in the United States has traditionally been 65, although that has been shifting. In 1986, all mandatory retirement was abolished, allowing employees to choose later retirement. Also, employer pension plans have lowered the age at which full pension benefits could be received. Reflecting these changes, the labor force participation rate of male Americans 65 years old has dropped from 49.9 in 1970 to 31.9 percent in 1990. Labor force participation for men at age 62 has also dropped—from 73.9 percent in 1970 to 52.5 percent in 1990 (table 4). Those elderly Americans who stay in the labor force generally change to a part-time schedule. Among all workers age 60 or older, 36 percent work part time, as do 52 percent of those age 65 and older.

Table 3. Job tenure with current employer, by age, 1990

Age	Mean years	Median years
Total, 25 years and older	8.2	5.6
25 to 34 years	4.1	3.5
35 to 44 years	7.6	6.0
45 to 54 years	11.3	10.0
55 to 64 years	14.6	12.4
65 years and older	16.0	11.1

Source: Wiatrowski, W.J., 1993, *Factors affecting retirement income*, *Monthly Labor Review* 116(3): 25-35.

Table 4. Labor force participation rates of men, by age, 1963-90

Year	Age			
	55	60	62	65
1963	92.8	88.1	79.7	54.4
1965	93.0	86.0	78.7	55.9
1970	91.8	83.9	73.9	49.9
1975	87.6	76.9	64.4	38.7
1980	84.9	74.0	56.8	35.2
1985	83.7	71.0	50.9	30.5
1990	85.2	70.5	52.5	31.9

Source: Wiatrowski, W.J., 1993, *Factors affecting retirement income*, *Monthly Labor Review* 116(3): 25-35.

The availability and adequacy of retirement income will continue to be a matter of national concern. Trends in retirement programs, population characteristics, and labor force participation need to be monitored by policymakers.

As benefits become available at an earlier age and life expectancy increases, people will rely on retirement income benefits for longer periods. What changes need to be made to ensure that acceptable levels of benefits may be received over longer retirement periods?

Source: Wiatrowski, W.J., 1993, *Factors affecting retirement income*, *Monthly Labor Review* 116(3):25-35.

Earnings of Couples: A Cohort Analysis

Social Security-covered earnings of wives relative to their husbands were examined, using interview responses from the 1990 Survey of Income and Program Participation linked to Social Security Administration records of covered earnings.¹ Earnings at ages 22-31, 22-41, and 22-51 for birth cohorts of wives born in the 1930's, 1940's, and 1950's were observed. Recent cohorts of wives had more years of earnings and higher levels of indexed earnings. Differences in earnings of wives relative to their husbands declined among younger age groups. Characteristics that are significantly associated with wives having low earnings relative to their husbands are explored.

About three-fifths of current beneficiary women age 62 or older collected benefits either partly or totally as wives or widows based on the earnings records of their husbands. One-fifth received retired-worker benefits as well as some wife or widow benefits because their retired-worker benefits were less than the benefits they received as wives or widows. This type of benefit receipt, known as dual entitlement, has increased over time as the percentage of older women receiving only wife and widow benefits has decreased.

Wife and widow benefits are based on marital status and in some cases on marital history. Wives and widows of insured workers can receive spousal or survivor benefits if age requirements are met. To be eligible for benefits, divorced women must have at least 10 years of marriage.

¹Covered earnings are earnings and self-employment income subject to Social Security taxes up to a maximum taxable amount.

Social Security benefits are based on a lifetime of covered earnings. An individual must be age 62 and have at least 40 quarters of Social Security covered earnings to be eligible for a retired-worker benefit. The benefit is based on the 35 years of highest earnings between age 22 and age 61, after dropping the 5 lowest years. Years with higher earnings before age 22 or after age 61 may be substituted for earnings from ages 22-61. The earnings are wage indexed, and an average of indexed monthly earnings (AIME) is computed. The basic benefit—the primary insurance amount (PIA)—is derived from the AIME, and gives greater weight to lower earnings. If the highest 35 years of earnings include years with low or zero earnings, they are averaged into the AIME, which lowers benefits.

The types of benefits that wives receive depend on their history of covered earnings relative to their husbands. Disregarding adjustments for early or late retirement, a wife beneficiary is eligible for half of a worker's basic benefit (that is, primary insurance amount), whereas a widow beneficiary is eligible for the full basic benefit of the deceased spouse. When a wife or widow of an insured worker is also entitled to her own retirement benefit based on her own earnings record, the wife or widow benefit is reduced by an amount equal to her own retirement benefit. Thus, a wife or widow receives the higher of her own worker benefit or the wife or widow benefit.

Years With Covered Earnings

Growing labor-force participation by recent cohorts of wives has reduced the proportion of wives with no earnings and increased their average number of years with earnings. Wives in younger age groups had more years with covered earnings relative to their husbands.

More recent cohorts of wives also had a greater work attachment. A largely complete work attachment is defined here as nonzero earnings in 80 percent or more of the years in the first decade, first two decades, and first three decades of the Social Security benefit computation period. The percentage of wives with a largely complete attachment to the labor force at ages 22-31 increased from 14 percent of wives born in 1930-34 to 52 percent of wives born in 1955-59. A group's relative work attachment remained stable across ages.

Average Earnings

The more complete work histories of women in younger age groups has contributed to higher earnings. Average monthly covered earnings of both wives and husbands have increased over time, but earnings of wives have increased more rapidly than those of husbands.

The average earnings of working wives with substantial work attachment were markedly higher at each age than the average earnings of wives with less substantial work attachment. Earning patterns of wives with a substantial work attachment were similar across age groups, although the wives born in the 1930's had lower earnings than the 1940's and 1950's groups. This pattern implies that changes in the degree of substantial work attachment may partially account for cohort variations in earnings.

Although these observed patterns of couple earnings and benefits cannot forecast the patterns at retirement age, they have remained stable within a birth cohort over the first 10, 20, and 30 years of the computation period (see table). Similar stability can also be seen in the percentages of wives who earned as much as their husbands. As a result, the pattern observed at ages 22-31 may be suggestive of future earnings patterns.

Wife's indexed earnings as a percent of husband's, at wife's age

Birth year	Total percent	0	1-30	31-49	50-99	100 or more
<i>Earnings at ages 22-51</i>						
1930 - 34	100	10	56	12	13	8
1935 - 39	100	7	51	15	15	12
<i>Earnings at ages 22-41</i>						
1930 - 34	100	14	57	11	10	8
1935 - 39	100	9	56	11	14	9
1940 - 44	100	8	53	12	17	10
1945 - 49	100	6	47	14	18	15
<i>Earnings at ages 22-31</i>						
1930 - 34	100	30	38	12	10	10
1935 - 39	100	21	45	11	14	10
1940 - 44	100	17	43	14	15	12
1945 - 49	100	12	42	13	17	15
1950 - 54	100	8	36	16	22	18
1955 - 59	100	7	33	14	26	20

Note: Percentages may not add to 100 due to rounding.

Source: 1990 SIPP matched with Social Security Administration Summary Earnings Record.

Occupations

Occupations can indicate the potential for change in future earnings. The occupational distributions of wives were similar across the age groups. The most prevalent category was "administrative support including clerical," which employed 28 percent of wives born in 1930-59. Another 16 percent were in service occupations, 13 percent were in professional occupations, and about 11 percent were in sales occupations. Thus, most wives had occupations that are not expected to have dramatic earnings growth over a career.

Couples With Low Earnings Ratios

Wives ages 22-31 with covered earnings of 30 percent or less than the earnings level of their husbands are considered to have a low earnings ratio. This percentage usually results in a higher wife benefit than a retired-worker benefit.

Sociodemographic characteristics of the wife—including two measures of minority status, number of children ever born, wife's education, and years of marriage—her husband's covered earnings, and her work experience when she was age 22-31 were examined because they relate to the choices women make between labor-force participation and time spent at home. In all age groups, the likelihood of a wife having low relative earnings was significantly related to years of education, years of marriage,

number of children, and husband's accumulated earnings level.

Wives who were better educated were significantly less likely to have low earnings in relation to their husbands. Wives with more years of marriage, with more children, and with higher-earning husbands were significantly more likely to have low earnings relative to their husbands. Of the characteristics examined, a wife's years with earnings was the most important factor in the likelihood of her having low average earnings relative to her husband. If the trend toward increased work experience among women continues, the proportion of wives with low relative earnings will decrease in future years.

Source: Iams, H.M., 1993, Earnings of couples: A cohort analysis, *Social Security Bulletin* 56(3):22-31.

Changing Eating Patterns: Meat, Dairy, Eggs, and Fats and Oils

U.S. per capita food supply data, calculated by the U.S. Department of Agriculture's Economic Research Service, was used to determine how Americans' eating patterns are changing over time. This report focused on animal products. Between 1980 and 1990, there was a decline in per capita consumption of animal fat, saturated fat, and cholesterol—indicating a gradual shift toward healthier diets.

Meat, Poultry, and Fish

In 1992, per capita consumption (boneless, trimmed equivalent) averaged 114 pounds of red meat (beef, pork, veal, and lamb), 60 pounds of poultry (chicken and turkey), and 15 pounds of fish and shellfish. Compared with 1980-83, Americans ate 10 pounds less red meat, 18 pounds more poultry, and 2 pounds more fish and shellfish.

Beef consumption peaked in 1985 at 75 pounds, then declined steadily to 63 pounds in 1992. Prices explain some of this decline—1992 per pound retail prices for chicken (\$1.41) and pork (\$1.98) were well below prices for beef (\$2.85).

Consumer food choice is also influenced by convenience. The most convenient form of beef, hamburger, accounted for 35 percent of beef consumption in 1985 and 45 percent in 1992. During this time, consumption of steaks was down slightly and consumption of roasts, which take longer to prepare, was down sharply.

Consumers have many more food choices available than they did in 1980. The poultry industry has provided many

new fast-food products and other products processed for consumers' convenience. For example, consumers are substituting fresh ground chicken and turkey for hamburger in many recipes.

Fast-food establishments that specialize in chicken have become increasingly popular in the last decade. The share of total per capita chicken consumption provided by food service establishments rose from 29 percent in 1981 to 40 percent in 1991.

Eggs

Between 1980 and 1992, annual egg consumption decreased by 14 percent from 271 to 234 eggs per person. Since 1985, there has been a 40-percent increase in per capita use of eggs in commercially processed egg products. In 1992, egg products accounted for 23 percent of total egg consumption, up from 13 percent in 1980-83. Because of food-safety concerns about salmonella contamination, many large restaurant chains and airlines are switching from fresh, whole eggs to processed products, such as pasteurized liquified eggs. Many analysts believe that processed products will account for 40 to 50 percent of the egg market by the end of the decade.

Dairy Products

Per capita consumption of dairy products (including butter) was up 12 pounds between 1980-83 and 1992 (milk equivalent, milkfat basis). There is a trend toward lower fat milk. Lowfat and skim milk accounted for 62 percent of beverage milk in 1992, up from 38 percent in 1980. However, the overall use of milkfat rose 2 percent because of increased cheese and fluid cream product consumption.

Excluding cottage-type cheeses, annual per capita consumption of cheese increased from 17.5 pounds in 1980 to 26 pounds in 1992. In 1992, each American ate an average of 9.2 pounds of Cheddar,

7.7 pounds of Mozzarella, and 1.7 pounds of cream cheese. During the period, consumption of cottage cheese declined 1.4 pounds to 3.1 pounds.

Per capita consumption of frozen dairy products rose 14 percent between 1980-83 and 1992. All of the increase was caused by greater consumption of ice milk and frozen yogurt.

Fats and Oils

Although total quantities of fats and oils in the per capita food supply have not declined in the past decade, consumers have been switching from animal fats to vegetable fats and oils. Consumers are demanding fats and oils that are reduced in saturated fat and cholesterol: major shortening manufacturers have removed all animal fats from their products; table spreads, salad dressings, and various sauces are available in reduced fat formulations; some restaurant chains now use pure vegetable oil for deep-frying; and low-fat and fat-free sweet baked goods can be purchased.

Help for the Consumer

Research indicates that consumer knowledge about dietary fats and other food components is poor. The Nutrition Labeling and Education Act of 1990 will help Americans make more informed food choices. The act mandates that by mid-1994, food labels on almost all foods must offer pertinent information, such as: total calories; calories from fat; and the amounts of total fat, saturated fat, and cholesterol per product serving. In addition, government and industry are mounting a multiyear food labeling education campaign to increase consumers' knowledge and effective use of the new food labels. Nutrition education programs can accelerate the shift toward healthier diets.

Source: Putnam, J., 1993, American eating habits changing: Part 1, *FoodReview* 16(3):2-11.

The School Breakfast Program

The U.S. Department of Agriculture provides funds to start up and maintain breakfast programs in eligible schools and child-care institutions. The program was initially authorized as a 2-year pilot program under the Child Nutrition Act of 1966. In fiscal 1967, the program served 80,000 children at a cost of \$573,000. In 1975, Congress amended the Child Nutrition Act to make the School Breakfast Program permanent, and in fiscal 1992, the program served 4.92 million children a day at a cost of \$787 million.

The School Breakfast Program is available to all public and nonprofit private schools and residential child-care institutions. Currently, the program provides over half of all elementary and secondary school children with free, reduced-price, or full-price breakfasts. The average price charged in 1991-92 was 28 cents for a reduced-price breakfast and 60 cents for a full-price breakfast.

Eligibility for those children receiving free or reduced-price breakfasts is based on the same criteria as is eligibility for the National School Lunch Program. For the 1993-94 school year, a child from a family of four with an annual income under \$18,655 was eligible for free breakfast. If the family's income fell between \$18,655 and \$26,548, the child could receive reduced-price breakfasts. About 87 percent of the breakfasts are served free or at reduced price.

The Federal Government reimburses the schools for each breakfast served. For the 1993-94 school year, the reimbursement rate was 96 cents for each free breakfast, 66 cents for each reduced-price breakfast, and 19 cents for full-price meals. Schools that serve a high proportion (40 percent) of school lunches at free or reduced prices—or have operating costs for breakfasts that

The school breakfast program requirements

Food component/item	Serving
<i>One serving from each of the following components</i>	
Fluid milk	
As a beverage, on cereal, or both	1/2 pint
Juice, fruit, vegetables	
Fruit and/or vegetables or full-strength fruit or vegetable juice (it is recommended that a citrus fruit/juice or another fruit or vegetable/juice that is a good source of vitamin C be offered daily)	1/2 cup
<i>And, one serving from each of the following components or two servings from one component</i>	
Bread products	
Whole-grain or enriched bread	1 slice
Whole-grain or enriched biscuit, roll, or muffin	1 unit
Whole-grain, enriched, or fortified cereal	1/4 cup or 1 ounce
Other	
Lean meat, poultry, fish, or cheese	1 ounce
Large egg	1/2 egg
Peanut butter or other nut or seed butter	1-1/2 tablespoons
Cooked dry beans or peas	4 tablespoons
Nuts or seeds	1 ounce

Source: Matsumoto, M., 1993, *Efforts are expanding the school breakfast program*, *FoodReview* 16(3):41-43.

exceed current reimbursement rates—can qualify for additional funding.

Meals served under the School Breakfast Program must meet Federal nutrition guidelines in order to be eligible for reimbursement. Breakfasts should provide 25 percent of the Recommended Daily Allowance (RDA) for nutrients.

A 1992 study conducted by USDA's Food and Nutrition Service found that school breakfasts were high in nutritional quality, balanced across a number of key nutrients but also high in fat, saturated fat, and sodium. To meet Federal Dietary Guidelines for fat, saturated fats, cholesterol, and sodium, lower fat meat and dairy products are being offered in some schools on a test basis.

Also, the amount of fresh fruits and vegetables offered to schools through the commodity distribution program is expected to double.

To encourage more schools to participate in the School Breakfast Program, Congress authorized "offer versus serve." Under this option, schools must offer all four meal components (see table), but if a child refuses one of the items, the breakfast would still qualify as a reimbursable meal. In addition, State and Federal outreach efforts have generated considerable interest in the program.

Source: Matsumoto, M., 1993, *Efforts are expanding the school breakfast program*, *FoodReview* 16(3):41-43.



Recent Legislation Affecting Families

Public Law 103-225 (enacted March 25, 1994)—the Food Stamp Program Improvements Act of 1994 amends the Food Stamp Act of 1977 to modify the requirements relating to monthly reporting and staggered issuance of coupons for households residing on Indian reservations. The law ensures access to retail food stores by food stamp households by establishing criteria that enable a small retail store to participate in the food stamp program. Also, the law provides the Secretary of Agriculture with additional authority to reduce fraud in the program.

Public Law 103-227 (enacted March 31, 1994)—the Goals 2000 Educate America Act improves learning and teaching by providing a national framework for education reform to ensure equitable educational achievement for all American students. Goals for elementary and secondary education for the years 2000 and beyond are to be established in the following areas: school readiness; school completion; student achievement and citizenship; teacher education and professional development; mathematics and science; adult literacy and lifelong learning; safe, disciplined, and alcohol/drug-free schools; and parental participation. The law specifies that, in order to be eligible for Federal moneys, a local educational agency must have in effect a policy requiring the expulsion for at least 1 year of any student who brings a firearm to school, and smoking must be prohibited in educational institutions. The law also promotes development and adoption of a voluntary national system of skill standards and certifications.

Public Law 103-230 (enacted April 6, 1994)—extends the Developmental Disabilities Assistance Bill of Rights Act through 1996. The law expands or modifies certain provisions related to:

programs for people with developmental disabilities, Federal assistance, protection and advocacy of individual rights, university-affiliated programs, and projects of national significance. Services must be provided to a developmentally disabled individual in accordance with the individual's unique needs. The law provides for Federal assistance only to those public and private entities that do not discriminate on the basis of race or ethnicity.

Public Law 103-239 (enacted May 4, 1994)—the School-to-Work Opportunities Act of 1993 establishes a national framework for development of school-to-work opportunities systems in all States and for other purposes.

Public Law 103-240 (enacted May 4, 1994)—amends Title 38, U.S. Code, to extend eligibility for burial in national cemeteries to people who have 20 years of service creditable for retired pay as members of a reserve component of the Armed Forces.

Public Law 103-252 (enacted May 18, 1994)—the Human Services Reauthorization Act of 1994 authorizes appropriations for fiscal 1995-98 to carry out the Head Start Act and the Community Services Block Grant Act and for other purposes.

Public Law 103-259 (enacted May 26, 1994)—the Freedom of Access to Clinic Entrances Act of 1993 and 1994 amends the Public Health Service Act to permit individuals to have freedom of access to certain medical clinics and facilities.

Public Law 103-261 (enacted May 26, 1994)—extends the period for compliance with the Nutrition Labeling and Education Act of 1990 for certain food products packaged before August 8, 1994.

Data Sources

Survey of Children and Parents

Sponsoring agency: The National Commission on Children with partial support from the Foundation for Child Development

Population covered: Parents in the Continental United States who live with their children and children ages 10 to 17 living in the households of these parents.

Sample size: 1,738 parents and 929 children

Geographic distribution: Continental United States

Years data collected: 1990

Method of data collection: Telephone interviews

Future surveys planned: No current plans

Major variables: Parental and child worries about physical safety, pregnancy, AIDS, alcohol and drug use, drunk drivers, meeting family expenses, parent-child relationships, discipline, school-related questions, aspirations for future schooling, child care, etc.

Sources for further information and data:

Tapes may be ordered from:
Inter-University Consortium for
Political and Social Research
P.O. Box 1248
Ann Arbor, MI 48106-1248
(313) 763-5010
or
Sociometrics Corporation
170 State Street, Suite 260
Los Altos, CA 94022-2812
(800) 846-3475

For questions about the survey
contact:
National Commission on Children
1111 Eighteenth Street NW
Suite 810
Washington, DC 20036
(202) 254-3800

National Household Survey on Drug Abuse

Sponsoring agency: U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse

Population covered: Civilian, noninstitutionalized population age 12 years and older within the United States. In 1991, residents of noninstitutional group quarters (such as shelters or college dormitories) and residents of civilian housing on military bases were added.

Sample size: 32,600 in 1991; 28,800 in 1992; 26,500 in 1993

Geographic distribution: Nationwide (Alaska and Hawaii since 1991)

Years data collected: 1971, 1972, 1974, 1976, 1977, 1979, 1982, 1985, 1988, 1990, 1991, 1992, and 1993

Method of data collection: Surveys are administered in person by interviewers. For sensitive questions, the respondent fills out confidential answer sheets.

Future surveys planned: Annually

Major variables: Lifetime, past year, and current use, as well as frequency of use of marijuana, cocaine (including crack), inhalants, hallucinogens, PCP, heroin, nonmedical use of stimulants, sedatives, tranquilizers, analgesics, cigarettes and smokeless tobacco, and alcohol.

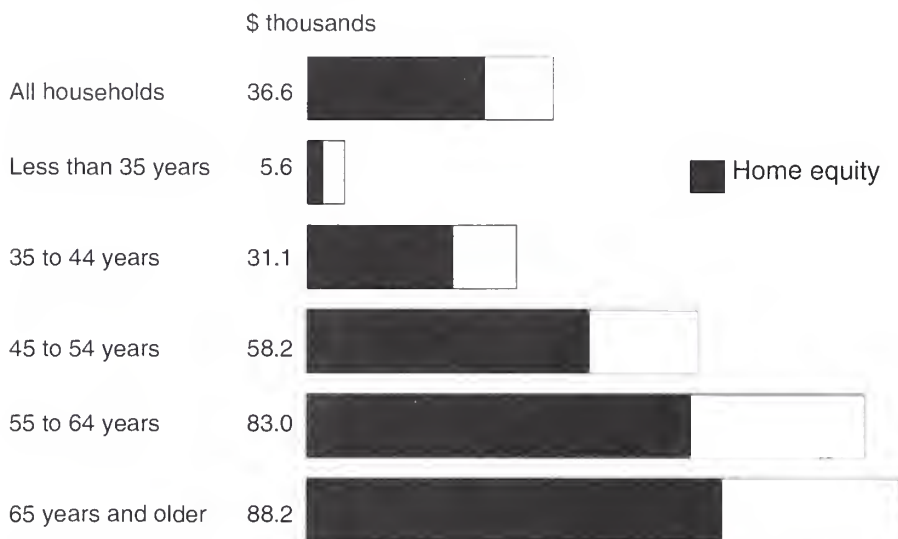
Sources for further information and data:

Data tapes are available from:
Inter-University Consortium for
Political and Social Research
P.O. Box 1248
Ann Arbor, MI 48106-1248
(313) 763-5010

Information about the survey can be
obtained from:
National Institute on Drug Abuse
Division of Epidemiology and
Prevention Research
Rockwall II, Suite 615
5600 Fishers Lane
Rockville, MD 20857
(301) 443-7980

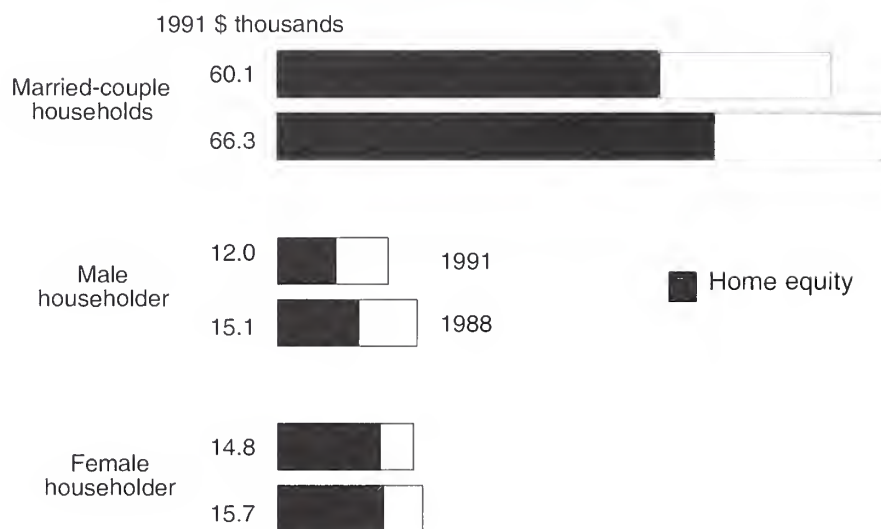
Charts From Federal Data Sources

Median net worth, by age of householder, 1991



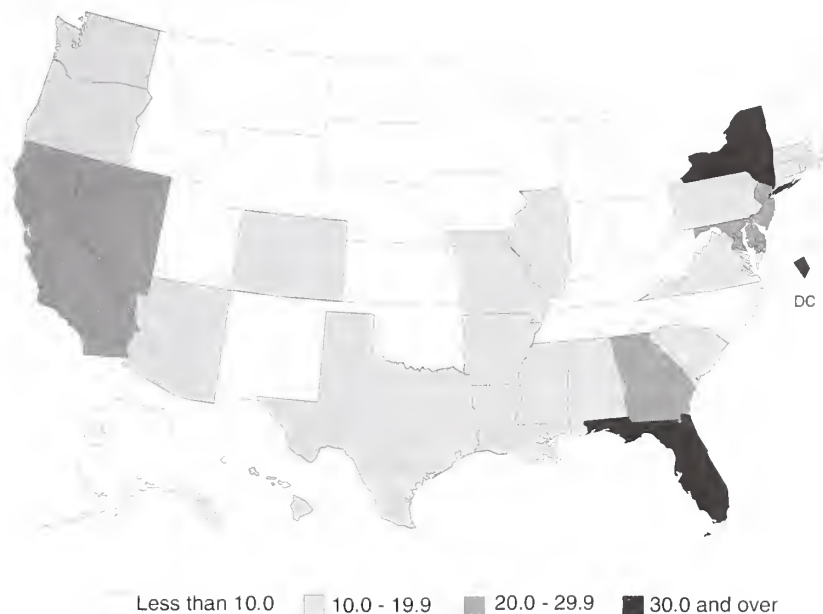
Source: Eller, T.J., 1994, *Household Wealth and Asset Ownership: 1991*, Current Population Reports, Household Economic Studies, P70-34, U.S. Department of Commerce, Bureau of the Census.

Median net worth, by type of household, 1991 and 1988



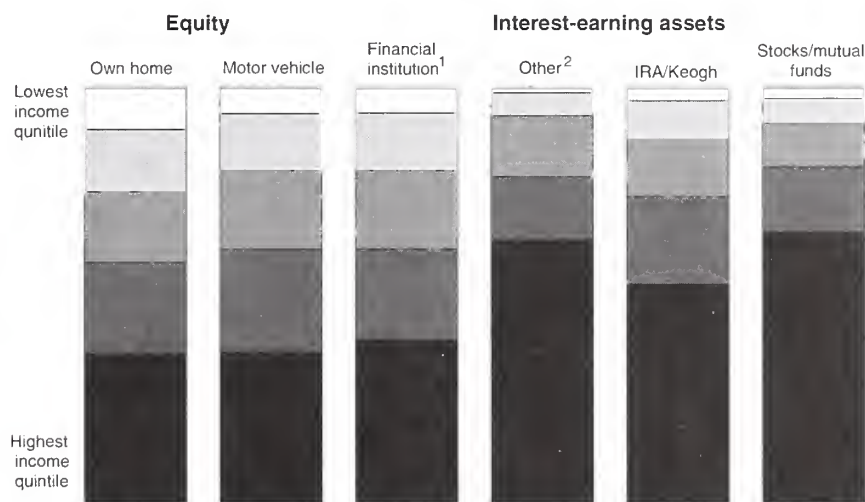
Source: Eller, T.J., 1994, *Household Wealth and Asset Ownership: 1991*, Current Population Reports, Household Economic Studies, P70-34, U.S. Department of Commerce, Bureau of the Census.

Acquired immunodeficiency syndrome (AIDS) cases per 100,000 population, by State, 1992



Source: U.S. Department of Health and Human Services, Public Health Service, Health, United States, 1992.

Distribution of the value of assets, selected asset types, by income quintile, 1991



¹Includes passbook savings accounts, money market deposit accounts, certificates of deposit, and interest-earning checking accounts.

²Includes money market funds, U.S. Government securities, municipal and corporate bonds, and other interest-earning assets.

Source: Eller, T.J., 1994, *Household Wealth and Asset Ownership: 1991, Current Population Reports, Household Economic Studies*, P70-34, U.S. Department of Commerce, Bureau of the Census.

Journal Abstracts and Book Summary

The following abstracts are reprinted verbatim as they appear in the cited source.

Chun-Yoon, J. and Jasper, C.R. 1994. Development of size labelling systems for women's garments. *Journal of Consumer Studies and Home Economics* 18(1):71-83.

This paper reviews the development of size labelling systems for women's garments sold in the U.S.A. The review shows that three trends are evident: (1) a continuous decrease in the numerical codes of sizes; (2) an emphasis on large and petite sizes; and (3) the introduction of split sizes. Problems with the size labelling systems currently in use in the U.S.A. are also discussed. A survey of consumers' preferences regarding various size labelling systems is recommended.

Dickerson, K.G., Dillard, B. and Froke, B. 1994. Assisting rural economies and families: A new paradigm for textiles, apparel and extension. *Journal of Home Economics* 86(1): 54-60.

The decline or closure of manufacturing plants in rural areas had led to economic hardships. Unlike metropolitan areas, where the adverse economic effects of plant closures can sometimes be lessened by a shifting of resources, rural areas are more likely to depend totally on a single industry for its welfare. This article describes one land-grant university's response to the decline of the apparel industry in rural areas. The University of Missouri-Columbia Textile and Apparel Management Department and the Human Environmental Sciences Extension led the cooperative effort in Missouri that resulted in the establishment of the Missouri Textile and Apparel Center and a new paradigm for textile, apparel and extension programs that supports industry in rural America.

Eisenhauer, J.G. 1994. Household use of open-end credit to finance risk. *The Journal of Consumer Affairs* 28(1):154-169.

The use of open-end consumer credit to finance risk is becoming increasingly popular, but has long been overlooked in the literature on household risk management. This paper derives explicit conditions under which credit financing is superior to insurance policies, product service plans, and self-insurance as a means of financing risk. Implications for consumers, manufacturers, insurers, creditors, and public policymakers are discussed.

Ha, M. and Weber, M.J. 1994. Residential quality and satisfaction: Toward developing residential quality indexes. *Home Economics Research Journal* 22(3):296-308.

The purpose of this study was to develop a residential quality index and to test its relationship to residential satisfaction. Factors representing 7 dimensions of residential quality were identified as indexes by using principal component factor analysis. Those factors included environmental safety, planning/landscaping, housing policy, sociocultural environment, public services, housing economics, and physical quality of housing. Of the 7 quality dimensions explored, 5 residential quality indexes—environmental safety, planning/landscaping, housing policy, sociocultural environment, and physical quality of housing—were indicated as significant factors in residential satisfaction.

Hernandez, D.J. 1993. *America's Children. Resources From Family, Government and the Economy.* Russell Sage Foundation, New York, NY 10021.

This book is one of a series that uses Census data to explore major changes and trends in American society. Data from the 1980 Census are compared with earlier Census data to document changes that have resulted in a decline in the human and financial resources available to children. These resources depend on the number, characteristics, and activities of family members within the constraints set by society, the economy, and public policy.

During the last two decades, the number of children living in poverty has been increasing. By 1988, U.S. children were 10 percent more likely than adults to live in poverty. Contributing factors included the rise in single-parent families and reductions in paternal income. Earnings for young men were depressed when the baby-boom generation reached maturity and caused the labor force expansion rate to nearly double. Also, job competition came from rising immigrant and female labor pools.

Transitions to nonfarm employment and maternal employment resulted in the loss of both husband-wife economic interdependence and community social controls, which had supported the maintenance of intact families. In 1989, 70 percent of U.S. children lived in either a dual-earner or single-parent family; this figure is projected to reach 80 percent by the year 2000.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, August 1994, U.S. average¹

Sex-age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2: ²								
20 - 50 years	\$52.00	\$65.70	\$81.20	\$100.80	\$225.50	\$284.60	\$351.80	\$436.70
51 years and over	49.20	63.10	78.10	93.40	213.10	273.70	338.10	404.50
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	75.90	94.70	115.80	142.20	329.00	410.20	501.90	616.20
6 - 8 and 9 - 11 years	87.00	111.20	139.20	167.30	376.90	482.20	603.00	725.00
INDIVIDUALS³								
Child:								
1 - 2 years	13.80	16.80	19.60	23.70	59.70	72.60	84.80	102.70
3 - 5 years	14.80	18.20	22.40	26.90	64.30	78.90	97.30	116.50
6 - 8 years	18.10	24.10	30.20	35.10	78.50	104.60	130.70	151.90
9 - 11 years	21.60	27.40	35.20	40.60	93.40	118.90	152.50	176.10
Male:								
12 - 14 years	22.40	31.10	38.70	45.40	96.90	134.70	167.50	196.80
15 - 19 years	23.20	32.00	39.90	46.20	100.60	138.80	172.70	200.20
20 - 50 years	24.90	31.70	39.80	48.20	107.90	137.50	172.60	208.90
51 years and over	22.60	30.30	37.40	44.80	97.70	131.30	162.00	194.00
Female:								
12 - 19 years	22.50	26.80	32.50	39.30	97.60	116.30	141.00	170.30
20 - 50 years	22.40	28.00	34.00	43.40	97.10	121.20	147.20	188.10
51 years and over	22.10	27.10	33.60	40.10	96.00	117.50	145.40	173.70

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(1). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(2). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

²Ten percent added for family size adjustment. See footnote 3.

³The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	August 1994	June 1994	July 1994	August 1993
All items	149.0	148.0	148.4	144.8
Food	144.8	143.5	144.2	140.8
Food at home	144.7	142.9	144.0	139.7
Food away from home	145.9	145.5	145.6	143.6
Housing	145.9	144.9	145.4	142.3
Shelter	161.7	160.1	160.8	156.8
Renters' costs ¹	172.1	169.6	171.0	167.3
Homeowners' costs ¹	166.1	164.8	165.3	160.8
Household insurance ¹	154.0	151.9	153.2	148.0
Maintenance and repairs	131.2	131.5	131.3	131.6
Maintenance and repair services	135.4	135.4	135.4	136.5
Maintenance and repair commodities	125.6	126.2	125.9	124.9
Fuel and other utilities	124.3	124.2	124.3	123.3
Fuel oil and other household fuel commodities	86.8	87.7	87.1	87.8
Gas (piped) and electricity	122.2	122.1	122.3	122.2
Household furnishings and operation	121.4	121.4	121.5	119.2
Housefurnishings	111.5	111.6	111.8	109.5
Housekeeping supplies	132.2	132.4	132.2	129.2
Housekeeping services	138.9	138.4	138.6	136.5
Apparel and upkeep	131.1	133.8	130.9	131.9
Apparel commodities	127.8	130.8	127.6	129.0
Men's and boys' apparel	125.7	125.9	124.9	126.0
Women's and girls' apparel	125.5	131.6	125.7	130.0
Infants' and toddlers' apparel	128.6	128.4	129.2	128.4
Footwear	124.5	127.3	125.0	123.5
Apparel services	155.9	155.5	155.7	152.0
Transportation	135.9	133.8	134.6	130.2
Private transportation	133.0	131.0	131.8	127.3
New vehicles	137.3	137.4	137.4	132.2
Used cars	144.0	140.9	142.6	137.5
Motor fuel	104.1	98.2	100.5	97.0
Maintenance and repairs	150.7	149.8	150.0	146.2
Other private transportation	162.0	161.3	161.5	156.4
Other private transportation commodities	103.3	103.4	103.3	102.7
Other private transportation services	175.7	174.8	175.1	168.7
Public transportation	173.2	169.9	171.4	168.1
Medical care	212.2	210.4	211.5	202.9
Medical care commodities	201.7	200.5	201.3	196.1
Medical care services	214.7	212.6	213.8	204.5
Professional medical services	193.5	192.3	193.0	185.9
Entertainment	150.2	149.8	150.2	145.8
Entertainment commodities	136.5	136.1	136.5	133.3
Entertainment services	166.6	166.3	166.7	160.9
Other goods and services	199.4	197.6	198.0	193.4
Personal care	145.0	145.2	145.0	142.0
Toilet goods and personal care appliances	141.9	141.8	141.9	139.8
Personal care services	148.3	148.8	148.3	144.3
Personal and educational expenses	223.9	220.9	221.6	211.6
School books and supplies	205.8	204.6	205.1	199.9
Personal and educational services	225.5	222.4	223.0	212.7

¹Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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*Indicates article was abstracted from another source.



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Highlights

Metro and Nonmetro Drug Use



Baby-Boomer Expenditures by Race and Ethnicity



Residential Energy Trends

